CLARENCE CHING
P.O. Box 6916
Kamuela, HI 96743
(808) 776-1199

Pro Se

Board of Land and Natural Resources
State of Hawai`i

In the matter of a Contested Case Hearing To deny the University of Hawai`i Institute for Astronomy's Application for the construction and operation of six 1.8 Outrigger Telescopes (CDUP application HA-3065) within the summit area of Mauna Kea Science Reserve, District of Hamakua, Island of Hawai`i	**DLNR File No. HA-02-06** PETITIONER CLARENCE CHING'S OBJECTIONS AND EXCEPTIONS TO THE HEARING OFFICER'S PROPOSED FINDINGS OF FACT, CONCLUSIONS OF LAW, DECISION AND ORDER; CERTIFICATE OF SERVICE

PETITIONER CLARENCE CHING'S OBJECTIONS AND EXCEPTIONS TO THE HEARING OFFICERS PROPOSED FINDINGS OF FACT, CONCLUSIONS OF LAW, DECISION AND ORDER

COMES NOW, PETITIONER CLARENCE CHING, and files the following Exceptions to the Hearing Officer's ("H.O.'s") Findings of Fact and Conclusions of Law, Decision and Order ("H.O. FOF/COL, D&O") in Board of Land and Natural Resources ("BLNR") Contested Case Hearing ("CCH") File No.HA-02-06.

I. GENERAL EXCEPTION TO HEARING OFFICERS FINDINGS OF FACT, CONCLUSIONS OF LAW, DECISION AND ORDER

Although PETITIONER concurs with the H.O.'s ORDER to **DENY** the Management Plan submitted by the University's Institute for Astronomy ("UHIFA")(H.O.'s EXHIBIT A), because Applicant does not meet its burden on the merits, the CDUA is *void ab initio* and any further discussion and/or argument is not

necessary. Additionally, PETITIONER files EXCEPTIONS (#1-80) to the H.O.'s FOF/COL D&O as set forth below:

PRELIMINARY ISSUE

However, before addressing these Exceptions, a most important issue needs to be addressed: In spite of the University of Hawai'i's claims that is represents the "consortium" of NASA, CARA, KECK, and UHIFA on the CDUA, there does not seem to be any document(s) in existence or available that memoralizes an operating agreement between these entities that **specifically** addresses IFA's power and authority to validly and legally represent the other entities on the subject CDUA process or this Contested Case Hearing process. In retrospect, there are operating agreements between the parties covering the Keck I and Keck II telescopes, but **not** anything covering the Outriggers.

This issue was included in PETITIONER CLARENCE CHING'S Memorandum in Support of Motion attached to CLARENCE CHING'S MOTION TO DISMISS UNIVERSITY OF HAWAI'I INSTITUTE FOR ASTONOMY'S CONSERVATION DISTRICT USE APPLICATION, OR IN THE ALTERNATIVE, TO MANDATORILY JOIN ALL REAL PARTIES IN INTEREST ON THE CONSERVATION DISTRICT USE APPLICATION, dated October 11, 2002. One of the specific issues raised was: Whether or not IFA has the legal and financial capacity, or is otherwise authorized, as the real party in interest, to be the applicant on the CDUA? A more specific question was: Is IFA an agent that would/could act legally for and on behalf of CARA?

In the absence of any documentation that **specifically appoints** UHIFA to be agent for the other entities for this specific project, the Keck Observatories Outrigger Telescopes, UHIFA is acting without authority and legal credibility.

Interestingly, the Motion was dismissed without a response to this issue. However, without anything specific in the record, and I don't know of any in existence, this is sufficient ground for BLNR to dismiss the CDUA. I so move (AGAIN).

EXCEPTIONS

Moreover, assuming that the lack of a proper permit application and proper notice of the application do not doom the application altogether, the proposed decision errs in granting the permit conditioned on **subsequent** approval of a management plan under some unspecified procedure. *See* H.O.'s FOF/COL D & O, Exhibit B, #9 at p.58 and H.O.'s Exhibit B, II CONSERVATION DISTRICT USE APPLICATION at p.2. This defeats the entire purpose of the Conservation District Use Application ("CDUA") rules, regulations, and procedures and raises serious due process concerns.

Hawai`i Administrative Rules ("HAR") § 13-5-24 allows astronomy facilities in a resource subzone "under approved management plan." The past tense indicates that a management plan must be approved prior to the time when specific use is approved.

HAR § 13-5-39, entitled "Management Plan Approvals," however, allows management plans to be "submitted with" the board permit application, indicating that at the very latest, a management plan must be considered and approved concurrently with the board permit application.

In requiring management plans for astronomy facilities, as well as other major activities such as commercial forestry and aquaculture, etc., the rules obviously contemplate the plan as a comprehensive framework for sound planning and management. By its nature, such documents must be developed and approved before, or at the very latest, at the same time as individual projects to be carried out "under" the management plan. Cf. Miami Sierra Club v. Administration Comm'n, 721 So.2d 829 (Fla. Ct. App. 1998) (holding that approval should not have been given before EIS and management plans were completed); Neighbors of Cuddy Mountain v. United States

Forest Serv., 137 F.3d 1372, 1376-77 (9th Cir. 1998) (reviewing the requirement that a forest management plan be developed before specific projects take place).

The approval of a management plan is inextricably intertwined with approval of the permit application **under** that plan. Without determining the consistency of proposed project with the comprehensive framework set forth in an approved management plan, the board cannot properly decide the ultimate question whether the permit application fulfills the criteria under HAR § 13-5-30(c).

Here, the proposed granting of the permit subject to **subsequent** approval of the management plan is wrong for at least two reasons:

First, the decision is fundamentally flawed in approving the permit application separate from, and prior to, approval of the management plan. The board cannot approve the permit in a vacuum, but must consider the permit application in light of an approved management plan. Allowing the subsequent approval of a management plan after approval of the permit application turns the entire planning and permit process upside down. It makes the management plan meaningless -- a helter-skelter product of ad hoc decision making and post hoc rationalizing. This violates the letter and spirit of the management plan requirements.

Second, the decision violates due process because it fails to provide for proper notice and a contested case hearing in relation to the BLNR's subsequent consideration of the management plan. The hearing officer's recommendations vaguely suggest that "the public shall have the opportunity to comment on . . . a management plan." *See* H.O. Exhibit B, II CONSERVATION DISTRICT USE APPLICATION at p.2. Much more than the mere opportunity to comment, due process entitles [the public interest parties] and the public to proper notice and consideration of the proposed management plan and the consistency of the proposed project therewith as a part of the overall contested case proceedings. Depriving the public of an opportunity to address the management plan as part of the contested case process constitutes a denial of due process.

Accordingly, if the BLNR fails to reject the permit application as invalid from the outset, it should instruct the H.O. to: (1) rescind his proposed final FOFs and COLs; (2) reopen the contested case hearing to consider a proposed management plan (assuming a proposed plan is timely submitted); and (3) issue new FOFs and COLs deciding, first, (a) whether to approve the proposed management plan, and then and only then, (b) whether to approve the permit application based on everything presented during the hearing, including the management plan. Nothing short of this procedure will satisfy the letter and intent of a prior-approved management plan, as well as due process.

II. SPECIFIC EXCEPTIONS TO EXHIBIT "A"- MANAGEMENT PLAN

2. The Contested Case Hearing Was Divided into Two Parts and Arbitrarily Expanded to Review a Management Plan

The Contested Case Hearing was divided into **two parts**. **Part I -was provided to establish whether the Applicant had met its burden under general rules and regulations governing the Conservation District.** The Applicant in this instant case, the University of Hawai`i's Institute for Astronomy ("UHIFA"), applies on **behalf** of NASA, CARA and WMKO, Conservation District Use Application (CDUA-HA-3065) for the NASA/KECK Outrigger Telescopes Project ("Project"). **Part II** of the CCH -to **review a Management Plan** pursuant to HAR §13-5-39.

3. The CDUP Application - *Void Ab Initio*

Petitioner MKAH filed a ***timely*** motion ***prior*** to the commencement of Part I of the CCH. *See* Exhibit 1. The Motion moved the BLNR to: (1) deny or continue the pending conservation district use permit application (CDUP Application HA-3065) submitted by the UHIFA for lack of an "approved management plan" under Hawai`i Administrative Rules ("HAR") § 13-5-24(c); and (2) require UHIFA to obtain BLNR's approval of a management plan that encompasses the Keck outrigger project as an approved land use prior to re-submission of its said CDUA.

The H.O. **did not rule** on Petitioners' Motion **until most of the CCH was substantially completed** and after the Petitioners had put on the majority of their case and witnesses for Part I of the CCH. The H.O. instead of granting the Motion outright, arbitrarily, and contrary to Petitioners' objections, decided to Expand the Scope of the Hearing, to review Appendix E of UHIFA's CDU Application.

The Petitioners, Mauna Kea Anaina Hou ("MKAH"), Royal Order of Kamehameha I ("ROOK I"), Sierra Club ("SC"), Clarence Ching ("Ching"), and Harry Fergerstrom ("Fergerstrom"), objected to the ruling to expand the scope of the Hearing, asserting in part that, 1) Appendix E of the CDUA was not a Management Plan under HAR §13-5-2; 2) Appendix E referenced draft documents and plans not approved by BLNR; and 3) the BLNR was legally required to publish re-notice before expanding the scope of the CCH so the public would be on notice that a Management Plan was going to be reviewed and given an opportunity to intervene. *See* Attached Exhibit 2.

4. Petitioners Second Motion Denied

Petitioners MKAH, SC, ROOK I, Ching, and Fegerstrom, jointly filed a second ***timely*** Motion (Exhibit 2, Petitioners FOF/COL # 56) moving the H.O. to specifically review UHIFAs **Application at Form 2- Section III titled "Types of Permits"**, which clearly demonstrated that **UHIFA had not intentionally indicated that is was seeking simultaneous approval of a Management Plan** under HAR §13-5-39, and further moving the H.O. to: 1) dismiss the **pending Conservation District Use Permit Application (CDUP Application-HA-3065) submitted by UHIFA for lack of a prior-approved management plan under HAR §13-5-24, or to require UHIFA to resubmit and re-notice its CDUP Application to provide the public with due notice that UHIFA intends to obtain BLNR's simultaneous approval of Management Plan.** *See* Exhibit 2.

5. Exceptions to the H.O.'s omission and or failure to consider Petitioners' FOF/COL's at p. 22-25 **.**

1. HAR § 13-5-24(c)(4) Permits Astronomy Only Under An Approved Management Plan

132. Although astronomy facilities are identified land uses allowed in the resource sub-zone, HAR § 13-5-24(c)(4) provides that identified land uses beginning with the letter "D" require a board permit, and where indicated, a management plan. The R-3 designation provides that only: "Astronomy facilities under an **approved management plan**" are allowed in the resource sub-zone. HAR § 13-5-24(c) (R-3 ASTRONOMY FACILITIES) (Emphasis added).

133. The UHIFA stated in its CDUP application that it was relying on the 1995 Revised Management Plan (CDUP HA-1573A) as the "approved management plan" under HAR § 13-5-24. The UHIFA's CDUP Application, Form 2c stated:

> **The proposed use for Astronomy Facilities (Use R-3, as defined in Section 13-5-24 of the Department's Administrative Rules requires a Board Permit under an approved management plan. In 1995, the Board approved CDUP HA-1573A; a revised management plan for UH controlled areas on Mauna Kea. Both UH and the Department were applicants on this CDUA and the subsequent CDUP. The proposed use is consistent with the relevant elements of this permit.** Subsequently, on June 16, 2000, the UH Board of Regents approved a new Master Plan for the Science Reserve (MPSR) for the new period 2000-2020 [the 2000 Master Plan). The Outrigger Telescopes Project is one of the projects proposed in the new Master Plan.
>
> (emphasis added)(Exhibit A-19, Form 2c),

134. Similarly, page 58, Section III.E.1.0 of the CDUP application stated that:

> **The proposed Outrigger Telescopes Project (Use R-3, as defined in Section 13-5-24 of the Department's Administrative Rules) requires a Board Permit under an approved management plan. In 1995, the Board approved CDUP HA-1573A; a revised management plan for UH controlled areas on Mauna Kea. Both UH and the Department were applicants on this CDUA and the subsequent CDUP. The proposed use is consistent with the relevant elements of this permit.** A copy of the approved Management Plan and CDUP, which are currently in effect, are attached to this application as Appendix D; Appendix E responds to HAR 13-5-39, Exhibit 3, Management Plan Requirements.
> (Exhibit A-19, Page 58)

135. William Stormont witness for the Applicant UHIFA, declared that they were submitting the 1995 revised Management Plan for this CDUP Application, under HAR 13-5-24. (WDT, William Stormont, P. 22).

136. Robert McLaren witness for the applicant also states, that the 1995 Revised Management Plan is what the UHIFA was submitting as the Approved Management Plan with their CDUP Application under HAR 13-5-24. (WDT, Robert McLaren, P. 22)

137. The UHIFA repeatedly indicated in their CDUA Application that it was relying on the 1995 Revised Management Plan under HAR § 13-5-24, and used the 1995 Revised Plan to claim **the proposed use was consistent with the relevant elements of the permit.**

Petitioner further objects:

1) **Applicant's CDUP Application was deficient when it was initially filed and did not meet the criteria enumerated in the rules and regulations that govern the Conservation District and continues to be deficient;**
2) **Petitioners were forced to put on the entire case based upon a deficient CDUP Application;**
3) **Petitioners were further required to put on a separate case on the alleged management plan and given only one month to prepare.**
4) **In both Parts I and II of the CCH, the absence of reasonable public notice resulted in fatal defects that could have otherwise been remedied had proper attention been given by the H.O. to Petitioners' timely filed Motions directing attention to these failures;**
5) **Failure of BLNR to act on the Petitioners' Motions resulted in the violations of Constitutional and Statutory provisions.**
6) **H.O.'s FOF/COL D& REWRITES the initially defective Application by seeking simultaneous approval of a Management Plan.**

2. UHIFA Did Not Check Off The Box In Its CDUP Application To Indicate That It Sought A Permit For A Simultaneously Submitted Management Plan.

138. The UHIFA's CDUA however, indicated that it was seeking only a Board permit under HAR § 13-5-34, and that it was <u>not</u> seeking simultaneous approval of a management plan under HAR § 13-5-39. **The UHIFA checked off "Board permit" under HAR § 13-5-34 and did <u>not</u> check off a permit for a management plan under HAR § 13-5-39.**

139. The CDUP Application Form, Section III-Type of Permit, lists the types of permits the applicant is seeking and includes permits for management plans under HAR § 13-5-39. (A-19, CDUP Form 2, UH02893).

140. In its application, the UHIFA represented to the BLNR and the public that it was seeking board permit only for the outrigger project, and not simultaneous approval of a management plan.

141. When the university submitted their CDUP Application (CDUA-3065) to DLNR for the Keck Outrigger Telescope expansion, **the university did not indicate** it was seeking simultaneous approval under HAR § 13-5-39. Nor did the university **submit an application for a management plan** pursuant to HAR § 13-5-39. Neither the DLNR staff nor affected agencies **reviewed the application as an application for a management plan.** (See CDUA Exhibit A-19 UH02892)

142. The **notice for public hearing** for Conservation District Use Application (HA-3065) indicated the UHIFA sought approval for the *"Construction and Operation of Six 1.8 Outrigger Telescopes; Appurtenant and Associated Structures, Temporary Access Use; Wekiu Bug Habitat Restoration; five signs on the W.M. Keck Observatory site"*.

143. The **public notice did not indicate that a management plan was under review for approval by the BLNR**. (See Notice of Public Hearings on Proposed Land Use Within the Conservation District February 4, 2002 (B-6 DW, Exhibit 3).

144. The public notice regarding the CDUP application published in the OEQC Bulletin, December 8, 2001, stated that the proposed action was to approve the Keck outrigger telescope project. There was no mention of simultaneous management plan approval. (B-6 DW, Exhibit 3).

3. The UHIFA Changed Its Story Mid-Stream

145. When these deficiencies where pointed out in Motions filed by Petitioners, the University in their Memorandum in Opposition ("Opposition) changed their story, the UHIFA no longer relied on the 1995 Revised Management Plan as the "approved management plan" under HAR § 13-5-24.

146. Instead, the UHIFA claimed it was seeking simultaneous approval of a "management plan" under HAR § 13-5-39, Exhibit 3, all along. (Memorandum in Opposition to MKAH's Motion to Deny Or Continue UHIFA's CDUP ("Opposition"), filed February 8, 2003).

II. Part II-Hearing Officer Arbitrarily Expands The Scope Of The Hearing

147. On March 25, 2003 UHIFA submitted Exhibit A-74, which contained an **altered version of the CDUA Appendix E (A-19)** submitted to the DLNR and noticed to the public. Petitioners SC, MKAH, Ching, Fergerstrom, ROOKI objected to the altered exhibit (A-74).

148. The UHIFA, claimed that **Appendix E of their CDUP Application was their Management Plan under HAR § 13-5-39. Exhibit 3**. *Id*.

149. **HAR § 13-5-2 defines a Management Plan as "a comprehensive plan for carrying out multiple land uses."** Appendix E which is titled "management plan requirements" **is not comprehensive**, but rather is a compilation of cobbled together references to numerous documents that include but are not limited to the **NASA Draft EA,** the **NASA Section 106 MOA, the Wekiu Bug Habitat Restoration Plan, and University's Mauna Kea Master Plan 2000 (Not approved by BLNR).**
(Exhibit A-19, Appendix E)

150. The UHIFA in their CDUA application relies upon the 1995 Revised Management Plan, to meet the criteria under **HAR § 13-5-39.**

151. Appendix E cites to the University Mauna Kea Master Plan 2000 that has not been approved by BLNR. (Exhibit A-19, Appendix E).

6. Arbitrary Consideration For Approval Of A "Management Plan" Violated Due Process And Notice Requirements.

Adequate Notice was NOT provided to the public regarding the Contested Case Hearing in violation to Hawai`i Administrative Procedures Act ("HAPA"), H.R.S Chapter 91, And The Due Process Requirements Under The 14th Amendment Of U.S. Constitution And Article 1, Section 5, Of The Hawai`i Constitution.

The public notices for both Parts I and II of the CCH proceeding failed to inform Petitioners, the public, or the pertinent governmental agencies that the BLNR would be considering approval of a "management plan" in a stand alone proceeding or, simultaneously, with the Board permit. In fact, the **public notices said only that the BLNR was considering approval of the Outrigger Telescopes Project.**

Public notices for Part I of the CCH, regarding the UHIFA's CDUP application and for this CCH gave no indication that a management plan would be approved by the CDUP. The notices stated only that the NASA-Keck outrigger telescope project would be considered for approval.

The public notice regarding the CDUP application published December 8, 2001 in the OEQC Bulletin, *see* Exhibit 2, stated that the proposed action was to approve the Keck outrigger telescope project. There was no mention of simultaneous management plan approval.

The first notice of a public hearing published on February 25, 2002, *see* Exhibit 2, stated only that public hearings would be held on March 20 and 21 regarding CDUP application HA-3065 - "Construction and Operation of Six 1.8-meter Outrigger Telescopes; Appurtenant and Associated Structures; Temporary Access Use; Wekiu Bug Habitat Restoration; five signs on the W.M. Keck Observatory Site." There was no indication that any management plan or modification of the existing management plan was at issue.

The public notice for the contested case hearing published on July 1, 2002, attached hereto as Exhibit 2, stated only that the BLNR would conduct a contested case hearing for Contested Case 02-06-HA. There was no indication that the UHIFA sought approval of a management plan. The public and other governmental agencies had no notice that a "management plan" relating to Mauna Kea was being considered for approval. Intervenors who petitioned for standing in the contested case hearing were not aware that a management plan was at issue. Other groups and members of the public may have sought to intervene if they had known a management plan was at issue.

7. There Was No Reasonable Notice Under HAPA.

Under HAR § 13-1-32, the conduct of a contested case hearing is governed by HAPA, HRS Chapter 91. It is "unquestionable" that BLNR must conform to the requirements of the Hawaii Administrative Procedures Act or HRS Chapter 91 when

acting in a adjudication of a contested case hearing. *Sharma v. State of Hawaii*, 66 Haw. 632, 637; 673 P.2d 1030 (1983). HRS § 91-9(a) requires that all parties to a contested case shall be afforded an opportunity for hearing after "reasonable notice." The notice must include: "**An explicit statement in plain language of the issues involved and the facts alleged by the agency in support thereof** . . . " *Id.* (emphasis added).

At least one Hawaii Supreme Court Justice has opined that HRS § 91-9 "provides individuals whose legal rights are adjudicated in an administrative proceeding as complete a forewarning as possible of the issues they must meet and the facts alleged against them. Unless the agency is unable to do so, **the notice** must in function constitute a bill of particulars -- i.e., it **must reveal the facts and circumstances at the heart of the proceeding. Its objective is clearly to provide for basic procedural fairness** . . . ." *State of Hawaii v. Gustafson*, 55 Haw. 65,74; 515 P.2d 1256, 1261-62 (1973) (J. Levinson, dissenting)(citing *Silver v. Castle Memorial Hospital*, 53 Haw. 475, 497 P.2d 564 (1972), *cert. denied*, 409 U.S. 1048 (1972), reh. denied, 409 U.S.1131 (1973)) (emphasis added).

The public notices in this case did not provide the public or the parties with reasonable notice of the issues to be decided in this proceeding. There was no "**explicit statement in plain language**" notifying the public that **a Management Plan** was under consideration or would be approved, in this Contested Case proceeding.

8. The Notices Violate Basic Due Process Requirements.

These vague and misleading public notices also violated due process requirements under the Hawaii and U.S. Constitutions. Hawaii's Constitution recognizes there is a protected interest in natural resources and the exercise of Native Hawaiian rights. Public natural resources are held in trust by the State for the benefit of the people. Haw. Const. Art. XI, Section 1. Each person has a right to a clean and healthful environment, . . . including control of pollution and conservation, protection and enhancement of natural resources. . . ." *Id.* at Art. XII, Section 9. Native Hawaiians also

have recognized interests in Mauna Kea as part of the ceded land trust. *Id.* at Art. XII, Section 1. Native Hawaiians also have a constitutionally protected right to exercise customarily and traditionally exercised rights for subsistence, cultural, and religious purposes. *Id.* at Art. XII, Section 7.

"An elementary and fundamental requirement of due process in any proceeding which is to be accorded finality is **notice reasonably calculated, under all the circumstances, to apprise interested parties of the pendency of the action and afford them an opportunity to present their objections.**" *Mullane v. Central Hanover Bank & Trust Co.*, Trustee, 339 U.S. 306, 314 (1950) (quoted with approval by *Eto v. Muranaka*, 99 Haw. 488, 498; 57 P.3d 413, 423 (2002). The "right to be heard has little reality or worth unless one is informed that the matter is pending and can choose for himself whether to appear or default, acquiesce or contest." *Id.* at 314 (quoted with approval by *In re Gensys Data Technologies, Inc. v. Genesys Pacific Technlogies*, 95 Haw. 33, 38; 18 P.3d 895, 900 (2001)). The Hawaii Supreme Court has adopted the reasoning of the *Mullane* court in interpreting Hawaii's due process clause. *Klinger v. Kepano*, 64 Haw. 4, 15-16; 635 P.2d 938, 946 (1981).

Failure to provide reasonable notice is reversible error. *See e.g., North Alabama Express v. United States*, 585 F.2d 783 (1978) (requiring republication of notice in federal register where Interstate Commerce Commission's notice did not include information regarding proposed scope of increased operating authority for a trucking firm and therefore did not provide adequate notice to potentially interested members of the public); *Public Service Commission of Nevada*, 662 P.2d 624 (Nev. 1983)(holding that a public utilities commission was required to provide the utilities with notice that accurately reflected the subject matter of the hearing where the notice was only for a rate increase and did not include a change in rate design; rate design issues were improperly heard and the general notice did not give the utilities an opportunity to oppose the proposed change).

Here, the public notices failed to inform anyone that the BLNR would be considering approval of a management plan. The notices are fatally defective.

9. The Public And Parties Have Been Prejudiced.

The prejudice to the public and the parties is overwhelming. The public is was not aware that a management plan, in stand alone or simultaneous approval, would be considered and may be approved by the BLNR in this proceeding. Organizations and individuals with specific interest had no notice of or opportunity to intervene. The Petitioners, *pro se* parties, were limited to presenting testimony to matters pertaining only to the outrigger project in Pat I of the CCH, and used their strained resources to bring mainland witnesses to Hawai`i or arrange for telephonic testimony, and then for Part II of the CCH were only allowed an additional month to prepare testimony regarding Appendix E which cite to unspecified portions of the 2000 Master Plan, that were <u>not</u> specifically identified in Appendix E, including but not limited to the NASA Draft EA, "forthcoming" Section 106 MOA, and Wekiu bug Mitigation Plan.

III. SPECIFIC EXCEPTIONS TO EXHIBIT B - CDUP APPLICATION

<u>Procedural History of the Contested Case Hearing</u>

10. Exception is taken with the H.O.'s FOF # 9 and #10 at P. 2 addressed in section regarding the National Historic Preservation Act 106 MOA ("NHPA-Sec. 106").

#9. There are two telescopes on the WMKO site. Constructionof Keck I commenced in 1985 with the leveling of the WMKO site. The University of Hawai'I was granted a Conservation District Use Permit (CDUP HA-1646) for Keck I in 1984. Subsequently, the Keck II telescope (CDUP HA-2509, 1991) and a carport (Site Plan Approval, 1997) were constructed on the site. McLaren WDT at 16, Exhibit A19 at 16.

#10. As proposed, each of the six Outrigger Telescopes will consist of a 1.8 meter (6 foot) diameter, f/1.5 primary mirror, a secondary mirror, a tertiary mirror, a dual star module and a starlight beam on the telescope yoke. . . . .

11. Further Exception is taken with the H.O.'s omission and or failure to consider the following facts contained in the Petitioners FOF/COL at P. 4:

2. Pursuant to HAR §13-5-40(4) the Chairman found that the public interest requires a public hearing on the application.

3. Mauna Kea Anaina Hou ("MKAH"), Royal Order of Kamehameha I ("ROOK I"), Sierra Club ("Sierra Club"), Clarence Ching ("Ching"), Hank Fergerstrom ("Fergerstrom"), Harold Jim and Anakura Melemai ("Jims"), KAHEA: the Hawaiian Environment Alliance ("KAHEA") and Ilio`ulaokalani Coalition (Ilio`ulaokalani") made oral requests for a Contested Case Hearing regarding the UHIFA's Conservation District Use Application to construct the NASA/Keck six (6) 1.8 meter Outrigger Telescopes and appurtenant structures and associated infrastructure in the conservation District on the summit of Mauna Kea.

4. MKAH, ROOK I, Sierra Club, Ching, Jims, KAHEA, and Ilio`ulaokalani all filed timely written petitions for a Contested Case Hearing.

Appointment of the Hearing Officer

12. Exception is taken with the H.O.'s omission and or failure to consider of the following facts contained in the Petitioners FOF/COL at P. 3-4.

5. The BLNR Chairman appointed the Honorable Boyd P. Mossman. Minute Order No. 1 (May 20, 2002) allowed comments or objection on his appointment as Contested Case Hearing Officer. University of Hawai`i General Counsel filed objections and requested Board Hearing on his appointment, citing his candidacy for the Office of Hawaiian Affairs ("OHA") and his potential duty (if elected as OHA Trustee) to promote or advocate for Native Hawaiian Rights as a conflict of interest. On July 23, 2002, the Honorable Boyd P. Mossman recused himself. (Minute Order No. 4)
6. Minute Order No. 4 announced the BLNR Chairman's second appointment, the appointment of Ms. Dawn S. Chang a former Deputy Attorney General for the State of Hawai`i. The University of Hawai`i General Counsel first requested her client list and then objected to her appointment claiming that because her Consulting Firm had a contract with OHA, the UHIFA claimed that Ms. Chang had a conflict of interest.

7. On August 28, 2002, in Minute Order No. 7 Ms. Chang withdrawal as Hearing Officer was announced.

8. Minute Order No. 7 also allowed comment on the appointment of Mr. Michael Gibson as contested Case Hearing Officer. MKAH requested a copy of Mr. Gibson's client list and were denied (MKAH Memo to DLNR Staff dated August 31, 2002 and Memo to BLNR Chairman dated August 30, 2002).

9. MKAH and Ching objected to the appointment of Mr. Gibson. Mr. Ching claimed that he believed Mr. Gibson had a conflict of interest and MKAH objections were based on the fact that only a couple of days were allocated to review his appointment (versus the two weeks allocated for the previous appointments) and that they were denied his client list to help determine any conflicts of interests that may be present.

10. Pursuant to Minute Order No. 8, dated September 6, 2002, the Chairperson treated MKAH and Ching's objections to the Appointment of Michael Gibson as Hearing Officer as Motions to disqualify the appointed Hearing Officer. The Chairperson denied the Motions finding that MKAH and Mr. Ching failed to state a sufficient basis for disqualification.

The Petitioners were <u>not afforded</u> a fair and reasonable time (allowed only 1 ½ working days) to review the proposed appointment of Hearing Officer (Michael Gibson) and were flatly denied any opportunity to determine if the Hearing Officer had any conflicts of interest (request for H.O. client list was denied). Conversely, the BLNR Chairman, had allowed 14 days for review of previous-appointed, but recused, Hearing Officers and further granted the Applicant UHIFA's requests for the client list (of Ms. Chang), which was later used to seek her recusal.

<u>Pre-Hearing Conference Statements</u>

13. Exception is taken with the H.O.'s FOF #44 at P. 5 as it contradicts the record and should be struck.

#44. MKAH submitted two undated Prehearing Conference Statements.

The record should reflect that MKAH filed both Pre-hearing Conference Statements timely. MKAH's pre-hearing conference statements were faxed and also mailed via Federal Express with timely postmark, and mailed via the U.S. Postal Service (with a dated Certificate of Service).

<u>Petitioner's Motion for Subpoena</u>

14. Exception is taken with the H.O.'s omission and or failure to consider of the following facts contained in the Petitioners FOF/COL at P. 8-9.

45. Petitioner's MKAH/ROOKI Joint Motion was granted in part in Minute Order No. 12, issued on October 31, 2002, allowing for further oral argument on the complete production of documents at the Pre-Hearing conference scheduled for November 13, 2002.

46. In Minute Order No. 16, issued on November 18, 2002, ORDERING the production of the following documents:
    (1) Copies of the Material Safety Data Sheets and any and all records that list hazardous materials used at the Observatory/Telescope Facilities on Mauna Kea, created between 1994 and the present.
    (2) Any and all documents and records, created between 1994 and the present, to or from the Department of Health that relate to septic tank, cesspool, leach field compliance or violations by the Observatory/Telescope Facilities on Mauna Kea.
    (3) Any and all documents and records, created between 1994 and the present, that relate to any septic tank, cesspool, leach field soil test conducted by or for the University of Hawai'i and or other Observatory/Telescope Facilities on Mauna Kea.
    (4) Any and all documents and records, created between 1994 and the present, that relate to the storage, use and release of "elemental" mercury used by the Observatory/Telescope Facilities on Mauna Kea.
    (5) Any and all documents and records, created between 1994 and the present, that relate to the water quality and soil contamination monitoring and studies conducted for Lake Waiau and Pohakuloa Gulch by or for the University of Hawai'i or any of the Observatory/Telescope Facilities on Mauna Kea.
    (6) Water quality studies, water monitoring, or soil contamination studies conducted between 1997 and the present by or for the University of Hawai'i or any of the Observatory/Telescope Facilities that sought to determine the levels and exposure of Lake Waiau and Pohakuloa Gulch to the following substances: (a) heavy or light metals; (b) fecal coliform; (c) nitrogen; (d) phosphorus; (e) solvents; (f) dye; (g) diesel (h) lubricants; and (i) antifreeze.

47. On January 14, 2003, The Hearing Officer in Minute Order No. 20 set the deadline for the production of documents to January 17, 2003.

48. The production of documents pursuant to Minute Order No.20, were filed in an untimely manner.

49. The Petitioners MKAH, and SC, received documents (bate numbers 00001-10,371) on a rolling basis and receiving the last document (mercury spill reports for the Canada-France-Hawai'i Telescope) on Feb 13, 2003.

Therefore;

1) **Document production was not complete because documents were not produced or entered into the record outlining exact amounts of hazardous materials used, stored or handled from the Observatories/Telescope Facilities.**

2) **Despite the fact that the subpoena was granted, with the State receiving its separate copy of the entire set of documents, the Petitioners were not permitted to enter all 10,372 documents into the record.**

3) **Not all material documents were considered in the Hearing Officer's Proposed Findings of Facts and Conclusions of Law, Decision and Order.**

Petitioners Motions Requesting Extension of Time

15. Exception is taken with the H.O.'s omission of fact, that the Applicant had not completed the production of documents by the deadline set by the H.O. The Deadline was set on January 17,2003, however, UHIFA continued to submit documents as late as February 24, 2003. **Therefore, Petitioners had little choice but to request an extension of time for the submittal of Witness Lists, Witness Testimonies, and Exhibits.**

Post-Hearing Motion

16. Exception is taken with the H.O.'s omission and or failure to consider the following facts contained in the Petitioners FOF/COL at P. 10.

59. Petitioners were barred from review of the official transcripts of the contested case hearing as provided in HRS 92-F-12 (a) (16) by Department of Land and Natural Resources. The Office of Information Practices ("OIP") assisted the petitioners to work with DLNR and on May 14, 2003, petitioners were permitted to access the transcripts, only three working days before the Findings of Fact were due.

The record should reflect that, despite the fact that the law requires full access to public information (i.e. transcripts), Petitioners were barred access by the BLNR's own staff. Although the OIP was able to assist the Petitioners in convincing BLNR's staff to open access, and the H.O. granted a 4 day extension for Petitioners to file their FOF/COL's , the fact remains that BLNR's own staff denied Petitioners the right to access information provided under State statute HRS 92F-12 (a) (16). The Petitioners' ability to access the information needed to file timely FOF/COL's became unreasonably limited.

The record should also reflect that Petitioners contacted Applicants' Counsel (via phone) to attempt to stipulate an extension of time to file timely FOF/COLs. Instead of Applicant's Counsel responding directly to Petitioners, Counsel responded with a counter-offer that it faxed to Petitioner MKAH and the H.O. Because the counter-offer was not accepted, the faxing of it, as if it were, to the H.O. violated *ex parte* communication provisions.

The counter offer included a provision allowing the Applicant to file its FOF/COL with the H.O. *ex parte* (and not the other parties) on May 19, 2003.

To keep two ex parte communication violations out of the record would indeed be crass.

Leases and Subleases

17. Exception is taken with the H.O.'s inclusion of H.O. FOF # 130 at P. 15, and move that it be struck from the record.

#130. The proposed site is located within the Astronomy Precinct at the summit area of the Mauna Kea Science Reserve. Chaffee WDT at 7; Exhibit A25 at Bates Stamp 3989.

The record should reflect that the "Astronomy Precinct" was created and designed under the University's Master Plan 2000. Said Master Plan has not been approved by the BLNR. It is inappropriate and probably unauthorized for the UHIFA to change the land use boundaries for astronomy development without prior approval from the BLNR.

The 2000 Master Plan

18. Exception is taken with the H.O.'s omission and or failure to consider the following facts provided in Petitioners' FOF/COL at P. 22.

131. Because the 1983/85 MKSRCDP and other BLNR approved plans limited the number of telescope development to the year 2000, and upon the recommendations issued by the State Auditor, the University of Hawaii produced a document called the Mauna Kea Master Plan 2000.

132. Although this plan was adopted by the University Board of Regents, June 16, 2000 this Plan has **never** been reviewed, adopted or **approved by the BLNR**.

133. **Therefore, there is currently no approved Management Plan under which the Outrigger Telescopes Project is permitted.**

Need to get pages for Kudrizki and Leialoha

19. Exception is taken with the H.O.'s FOF #164 at P. 20 as the statement is incorrect.

#164. In 1983, the University of Hawai'i adopted the Mauna Kea Science Reserve Complex Development Plan (CDP). The CDP projected development up to the year 2000 and it contained a Management Plan, which was accepted by the Board of Land and Natural Resources as CDUP HA-1573. McLaren WDT at 9.

20. Exception is further taken with the H.O.'s omission and or failure to consider the following facts provided in Petitioner's FOF/COL's at P. 15-18, which provides a thorough documented history of the development of the Complex Development plan and subsequent revisions.

96. Public attention was drawn to Astronomy Development on Mauna Kea when University of Hawai`i began construction of its first telescope in 1967. (Air Force). (Exhibit F-30, P.3)

97. [T]he **public was concerned that the astronomy interests might completely take over the mountain…hunters were concerned that further development might restrict their hunting range, naturalist pointed to the unique eco-systems on the slopes and summit, and snow play participants, skiers and hikers wanted assurances that their interests would be protected…"**(Exhibit F-30, P.4)

98. In 1974, Governor George Ariyoshi in response to the public's concerns directed the Department of Land and Natural Resources (DLNR) to develop "a master plan…for Mauna Kea above the Saddle Road…from this directive, **the DLNR initiated a comprehensive planning process for Mauna Kea to ally their fears...Since that time four plans specifically related to guiding and controlling development on Mauna Kea have been prepared:**

- **DLNR 1977 Mauna Kea Plan was adopted in the 1977;**
- **DLNR 1980 Hale Pohaku Complex Development Plan (HPCDP):**
- **University of Hawai`i Research Development Plan for the Mauna Kea Science Reserve and Related Facilities (UHRDP).** A programmatic Master Plan for Astronomy Development until the year 2000, which was adopted by the Board of Regents in January 1982; (Exhibit F-30)
- **The Mauna Kea Science Reserve Complex Development Plan (MKSRCDP);** The general purpose of the fourth plan, the (MKSRCDP) was to guide the implementation of all proposed astronomy development with in the Mauna Kea Science Reserve and related facilities (as set forth in the UH RDP) to the year 2000, and to present a management plan and implementation strategy for managing and monitoring the various users of the mountain…"

100. The Board of Land and Natural Resources ("BLNR") on February 22, 1985 approved the Management Plan contained in the Mauna Kea Science Reserve Complex Development Plan ("MKSRCDP") issuing it the CDUA No. HA-1573. (Exhibit F-23 Audit of Management, P. 5-6)

101. Although the [Mauna Kea] SRCDP, is based on the assumed mix of telescopes presented in the UH RDP, the plan allows for flexibility in that any combination

of optical/infrared and millimeter-wave telescopes is acceptable ….**as long as the number of major telescopes…on the mountain does not exceed a total of eleven [11] (a total of thirteen when two [2] smaller telescopes are included)…"** (Bracketed information and emphasis added) (Exhibit F-30, P.13 and 42)

102. With in the Mauna Kea Science Reserve are **12 major telescope facilities** and **1 minor telescope facility** as defined in the MKSRCDP, **one of the 12 majors however, is made up of 24 telescopes placed upon 24 individual sitting pads**. The Telescope Facilities on the summit of Mauna Kea are listed below showing the CDUA numbers and dates issued by BLNR:

1.	KECK I	(HA-1646)-1984
2.	KECK II	(HA-2509)-1991
3.	UH 88"	(HA-954) (post facto)
4.	UH 24" (considered a minor under MKSRCDP)	(HA-954) (post facto)
5.	CFHT	(HA-527) -1974)
6.	UKIRT	(HA-653) No date rec.
7.	NASA IRTF	(HA-653) No date rec.
8.	CSO	(HA-1492)-1982
9.	JCMT	(HA-1515)-1983
10.	VLBA	(HA-2174)-1988
11.	JNLT-Subaru	(HA-2462)-1991
12.	Gemini-North	(HA-2691)-1993
	(which replaced the other UH 24" minor under the MKSRCDP)	
13.	SMA (with 12 individual telescopes)	(HA-2728)-1994

(Exhibit F-23 Audit of Management, P. 3)

104. The Mauna Kea Science Reserve Complex Development Plan approved by the Board limits the number of telescopes to 13, to limit the impact of development on the resources. When the plan was developed in 1983, interferometers (a type of telescope with numerous antennae that may range over ½ mile, with a single control room) were not anticipated. However, the "footprint" of interferometers is far larger, and the impact on the environment is far greater that the Board envisioned when the original plan was adopted. (Exhibit F-23 Audit of Management p. 27-28). Other facilities built were not technically defined as telescopes, yet they had an impact. The auditor stated that the current method of limiting development by number of telescopes in insufficient to address the impact that these proposed projects have on Mauna Kea, and called for the university to address the carrying capacity of the reserve. (Exhibit F-23 Audit of Management P 30-31)

105. The MKSRCDP, in compliance with the 1977 Mauna Kea Plan requires any amendments or updates to be approved by BLNR. (Exhibit F-30, P.6)

The 1995 Revised Mauna Kea Management Plan

106. In 1995 the **BLNR and the University sought to amend the MKSRCDP to address Commercial Use and Public Access.** It states **"**This revised **public access management plan supersedes and replaces the management plan approved by BLNR on Feb. 22, 1985 in CDUA HA1573.** This plan **differs from the plan approved in 1985** in the following manner":

- **Management and enforcement of public and commercial use of MK is the responsibility of DLNR except for specific rights reserved for UH.**
- **Permitted Commercial uses and management controls are incorporated in the Plan.**
- **Some controls are eliminated and/or modified and new ones added to reflect UH's experience in the past ten years, especially since the major portions of the road have been paved. The primary criterion for controls, however, has been and continues to be public safety.**

107. The 1995 Revised Plan --Part III: Management and Controls on page 7**,** states:

"Astronomy-related uses in the UH Management Area are controlled by the 1977 DLNR Mauna Kea Plan, the Hale Pohaku Master Plan, the SRCDP, and the CDUA process."

"Visitor's access and use is controlled as set forth below:

- **DLNR has the authority to determine permitted public and commercial uses of the UH Management Area-subject to terms of Lease between UH and DLNR.**

- **The NARS is under NARS Commission and DLNR"**.

108. The BLNR approved the Revised Management Plan (HA 1573-A) in March 1995. **The 1995 Revised Management Plan required all astronomy- related uses to remain under the control of the previously approved BLNR plans, management plans including the 1983/85 MKSRCDP.** (Exhibit A-19, UH03003).

109. The Outrigger Telescopes project **does not** fall under the 1995 Revised Management Plan or **any** of the previously approved plans cited therein, including the 1983/85 MKSRCDP.

21. Exception is taken with the H.O.'s omission and or failure to consider the following facts provided in the Petitioner's FOF/COL at P. 18-21 that provide

background regarding the University's failure to comply with the provisions of the Complex Development Plan approved by the Board.

Legislative Auditor's Review of Management on Mauna Kea Summit

110. In February 1998, the legislature called for a Moratorium and any further development or construction on Mauna Kea and called for a Legislative Audit of the Management of Mauna Kea. The Auditor of the State of Hawaii, conducted an audit of the University of Hawaii's and the DLNR's management of the Mauna Kea. (Exhibit F-23 Audit of Management of Mauna Kea and Mauna Kea Science Reserve, P.15).

111. [T]he University of Hawai'i's management of the Mauna Kea Science Reserve is inadequate to ensure the protection of natural resources, and that the Department of Land and Natural Resources [DLNR] needs to improve its protection of Mauna Kea's natural resources." (Exhibit F-23 Audit of Management of Mauna Kea and Mauna Kea Science Reserve, P.15.

112. Piecemeal efforts provide no protection, and possibly violated the General Lease. (Exhibit F-23 Audit of Management of Mauna Kea and Mauna Kea Science Reserve, P.21).

113. The auditor reported that while the comprehensive management plans were developed, they were poorly implemented. In the early development phase of Mauna Kea, each telescope project required a separate CDUA and a related environmental assessment. Several projects were approved with brief EA that stated that no impact statement was necessary. However **the cumulative impact of developing the entire complex was undetermined**. (Exhibit F-23 Audit of Management, p 19)

114. The University's Environmental Impact Statement failed to **adequately disclose** the **cumulative impact** of development as it was supposed. *Id*. P.21 The University's **EIS** … it was based on a limited area within the reserve, and **based on assumptions without actual data** on the potential facilities." (Exhibit F-23 Audit of Management, p 21)

115.. The auditor specifically states "the Institute for Astronomy should develop a new method of measuring the impact of future development on Mauna Kea and present this method to the BLNR for approval. The …method should assess the impact of each project as well as the impact of total development. …The method used should include methodology that distinguishes and gauges the impact on land area, biota/fauna, and sites of historic/cultural significance." (Exhibit F-23 Audit of Management, p 36)

116. The MKSRCDP identifies cesspools and septic tanks with leaching fields as a means of sewage disposal. The plan identifies the potential risk of effluent discharge to Lake Waiau, craters and cinder cones and recommends appropriate siting. It further recommends monitoring on a continuing basis to identify and control adverse environmental impacts. No data is in evidence to indicate that continuing monitoring and remediation implementation have been conducted. **The auditor noted that the**

university's lack of commitment and the DLNR's failure to enforce plans compounded the problem of inadequate environmental protection. (MKSRCDP p 69, Exhibit F-23 Audit of Management, p 18)

117. The auditor noted that the cultural value of Mauna Kea is largely unrecognized. "Very little effort was made to recognize the cultural significance of the mountain." (Exhibit F-23 Audit of Management, p 21)

118. The auditor stated that the **DLNR's current practice is simply to state that "all mitigative measures proposed in the EIS that included descriptions of this project shall be incorporated as conditions of approval"** The auditor stated that "This **practice is insufficient and has no force or effect**." (Exhibit F-23 Audit of Management, p 32)

119. The MKSRCDP identifies areas to the north and west of the ridge and steep slopes of Pu`u Wekiu as habitat for the Nysius (wekiu) bug. "Care must be taken during construction activities to insure minimal disturbance to the habitat". As part of the mitigation measures outlined in the 1982 EIS, the report recommended that a biologist visit the site during construction and conduct a survey after construction to assess the relative impact on endemic species. The university did not implement these measures; the construction of roads, fill and cutting of crater walls in the prime habitat damaged the habitat of the rare insect. **The auditor noted that the university commissioned a study of the arthropod only after the damage had been done.** (Exhibit F-23 Audit of Management, p 24)

120. Not only have management plans been ignored, so have administrative requirements been overlooked or complete in an untimely manner. The auditor's report outlines a **pattern of practice** dating back to the 1967, and continuing for twenty years, of the **university's failure to submit timely applications for approval of telescopes constructed and subleases issued, thus requiring after-the-fact review.** "The administrative duties that are linked to the management of Mauna Kea require timely completion for both the university and the department to adequately manage Mauna Kea." (Exhibit F-23 Audit of Management, p 33)

121. The auditor stated that the **Conservation District permitting process should be strengthened to include specific permit conditions requiring implementation, monitoring and enforcement of mitigating measures contained in the *Environmental Impact Statement* (EIS) designed to minimize the impact of development**. (Exhibit F-23 Audit of Management, p 32)

122. The auditor noted that while the operating organizations provide some funding for infrastructure, and shared costs, **"there is no provision to dedicate significant amounts of funding for on-going environmental protection….Overall the current arrangement allows the university to receive research benefits despite budget cuts or redirection of funds to competing priorities such as resource protection."** (Exhibit F-23 Audit of Management, p 17)

123. The General Lease (S-4191), dated June 21, 1968, states that the university "shall not damage, remove excavate, disfigure, deface, or destroy and object of antiquity, prehistoric ruin, or monument of historic value." (Exhibit A-1, Exhibit F-23 Audit of Management, P. 22-23)

130. The General Lease (S-4191) requires that plans for construction and plot plans for improvements shall be submitted to the Chairman of the BLNR for review and approval prior to commencement of construction. The auditor reported that between 1967 and 1970 three telescopes were built by NASA, the Air Force and the university, without CDU permits, and **after-the-fact approvals were not sought until six years later.** (Exhibit A-1, Exhibit F-23 Audit of Management, p 33)

124. The General Lease (S-4191) requires that "The lessee shall not sub-lease, sub-rent, assign or transfer any rights there under without the prior written approval of the BLNR." Yet the auditor found that "In 1997, the university **requested retroactive approval** for four sub-leases". (Exhibit A-1, Exhibit F-23 Audit of Management, p 33)

125. The General Lease (S-4191) states that "The lessee shall keep the demised premises and improvements in a clean, sanitary, and orderly condition", but the auditor points to the **"university's failure to monitor construction and to check for proliferation of trash".** (Exhibit A-1, Exhibit F-23 Audit of Management, p 24-25)

126. The General Lease (S-4191) issued to the university requires that items be removed before the lease termination, or be abandoned with prior approval from the BLNR. deleted this provision from the MAUNA KEA SRCDP adopted in 1985. The auditor noted that since the university has failed to remove remnants from abandoned facilities**, "the Board (BLNR) may have to require security deposits for all existing telescope structures to assure that those structures and facilities will eventually be removed and summit restored to its pristine condition."** (Exhibit A-1, Exhibit F-23 Audit of Management, p 25)

127. Without controls to ensure implementation of the university's management plan, the university was allowed to continue development without completing prior tasks outlined in management plans. "(Exhibit F-23 Audit of Management, p. 32)

128. The auditor further stated that the University **"did not fulfill its obligations as a responsible leaseholder of conservation lands."** During the period when more than $600 million was spent to construct telescopes and antenna on Mauna Kea, and another $50 million per annum is spent on operation, **"the University claims it lack the funds and the positions to implement the protection controls outlined in its management plans."** "It was more concerned about benefits to its research program than monetary consideration for the state, and therefore charged little or nothing to observatories using the mountain". (Exhibit F-23 Audit of Management, p.17)

129. The auditor faulted the University in its approach to the granting of land use agreements to foreign operators. **A lease agreement could stipulate a mechanism to**

provide funding for environmental protection and management, subject to the review of State agencies, but the University chose instead, in lieu of rent, to exchange the sublease for viewing time on the telescopes. (Exhibit F-23 Audit of Management, p. 17)

22. Exception is taken with the H.O.'s omission and or failure to consider the following facts provided in Petitioners' FOF/COL's at P.16.

23. Exception is taken with the H.O.'s FOF #165 at P.20. This statement is misleading and incomplete.

#165. The University of Hawai'i Board of Regents approved the Mauna Kea Science Reserve Master Plan in Jne 2000 ("2000 Master Plan"). The 2000 Master Plan was never adopted nor approved by BLNR. In the 2000 Master Plan, the University concluded that there was a need for a single entity to manage the comprehensive plan for the Mauna Kea Science Reserve. The 2000 Master Plan calls for the management organization to be housed within the UH system and funded as an ongoing program unit of the University of Hawai'i at Hilo ("UH-Hilo"). In accordance with the 2000 Master Plan, UH-Hilo Cancellor Rose Tseng established the Office of Mauna Kea Management ("OMKM") on August 1,2000. Stormont WDT at 2; Kudritzki Tr. 2/10/03 at 121:19-22; McLaren WDT at 15.

The record reflects that the University has never integrated the functions of the Institute for Astronomy with the Office of Mauna Kea Management. In direct testimony, the applicant's witness, Rolf Peter Kudritzki stated that the UH IfA (UH Manoa) controls what goes on inside an astronomy facility, while OMKM (UH Hilo) is responsible for what goes on outside the facility. (Kudritzki Tr P.) Stormont confirmed that OMKM has no jurisdiction over the buildings, but could not say whether his organization had jurisdiction over the land under the buildings. (Stormont RT P. 238 at 13, 239 at 16)

Although the application proposes development OUTSIDE the Keck I and II observatories, OMKM did not apply for the CDUA, UH IfA signed and submitted the application. Robert McLaren admitted that he wrote most of Appendix E Management Plan Requirements, which the H.O. found "failed to meet its burden," and that he (McLaren) has no expertise or training in resource management.

Contrary to the UHIFA's assertion that OMKM has been established to manage the comprehensive plan, Mr. Stormont stated that he is not fully versed in the administrative rules of the Conservation District under which the University operates the Science Reserve. He stated the he does not know if the UH Chancellor, the Mauna Kea Management Board, or the Board of Regents were versed in the Rules either. (Stormont RT on P 219-220).

The astronomy facilities do not fund the management of the Science Reserve or the OMKM. Mr. Stormont stated that the budget for the OMKM comes from the

Legislature as state appropriated funding. (Stormont RT at P. 219 at 8). Mr Stormont stated (Tr 208 at 10) that there is no program in place that will guarantee management of the mountain in light of recent cutbacks in University funds.

24. Exception is taken with the H.O.'s FOF# 166 at P. 20 This statement is misleading.

#166. OMKM is the University office charged with ensuring compliance with and implementation of the 2000 Master Plan. Stormont WDT at 1; Kudritzki Tr. 2/10/03 at 130:9-13.

The record reflects, contrary to the UHIFA's assertion that OMKM is the University office charged with ensuring implementation of the University's internal document (Master Plan), **Mr. Stormont, director of OMKM, stated that the office has not promulgated administrative rules to do so, nor has the OMKM requested BLNR approval for the plan – three years after the UH Board of Regents reviewed the internal document.** (Stormont RT P. 214-5 at 10-25,)

With no rules in place, the University has **no** jurisdiction, authority or enforcement power. Mr. Stormont stated that violations of Conservation District rules can be enforced by DLNR DoCaRE. He also states that DLNR has not done its job to protect the resources on Mauna Kea. (Stormont RT p. 224 at 5.)

Access for the general public is handled by Mauna Kea Support Services (UH Manoa) and by OMKM (UH Hilo), but neither entity has jurisdiction, authority or enforcement power to regulate access. He could not say when administrative rules for the OMKM might be put in place. (Stormont RT P. 215-6)

Mr. Stormont also stated that OMKM does not have a cultural monitoring procedure, nor any criteria for doing so. OMKM did not develop the cultural monitoring program proposed for the WMKO application, nor has he seen a draft of it. He also does not know if there will be public input allowed for the monitoring project. (Stormont RT P. 208-210)

25. Exception is taken with the H.O.'s FOF # 168 at P. 20 This statement is misleading.

#168. The 2000 Master Plan sought to include community involvement in the management of the Science Reserve and recommended a management board "composed of members representing the major stakeholders of Mauna Kea." (Exhibit A10 at p. X-7). In fulfillment of this recommendation, the Mauna Kea Management Board ("MKMB") was established. The MKMB is comprised of seven members appointed by the UH Board of Regents. Stormont WDT at 2.

The operant words are "sought to include community involvement in the management of the Science Reserve". The record reflects that all members of the MKMB and the adjunct committee are selected by the chancellor and approved by the Board of Regents, however, community participants are appointed with no opportunity for public input with regard to selection.

Mr. Stormont testified (RT P 242 at 19) that as various small projects come into the office, input has been sought from the MKMB and Kahu Ku Mauna. However, neither the WMKO CDUA, nor the deficient Appendix E, were reviewed by the MKMB or the Kahu Ku Mauna. Stormont stated that the CDUA and compliance with the Master Plan are two separate processes. (Stormont RT at 243 at 17).

Two members of the MKMB Environment Committee (Ward and Leialoha) reported that the committee was not contacted to review the WMKO CDUA, and in fact, the committee had not convened for over a year.

Contrary to Mr. Stormont's statement, the meetings of OMKM, are scheduled monthly, but are often cancelled. While open to the public, meetings are not noticed, and the agenda is not published. Unless specifically added to the agenda via a prior written communication, the public is not allowed to comment on action taken by the Board until the end of the meeting. (Ward Tr)

26. Exception is taken with the H.O.'s FOF # 169 at P. 20

#169. A special group, the Kahu Ku Mauna Council (Guardians of the Mountain), is appointed by the Mauna Kea Management Board to serve as advisors to the OMKM and MKMB on all matters impacting the cultural integrity of Mauna Kea. Stormont WDT at 3.

27. Exception is taken with the H.O.'s FOF # 172 at P. 21 This statement is incomplete and thus misleading.

#172. Projects are also reviewed at the Chancellor level. Thus, after OMKM and MKMB review a project, the Chancellor of UH-Hilo will also review it. If the project is initiated by the University of Hawai'I Institute for Astronomy, the project swill also be reviewed by the Chancellor of UH-Manoa. Stormont WDT at 8.

Again, the record reflects, all community representatives are appointed by UH Administration, with no public input in the selection process. A Review of the merits and demerits of the project by the University and community members is not undertaken until the CDUA process has been completed. Therefore, any changes to the plan requested or proposed by these entities could require a revision of the BLNR-approved CDUP or Management Plan, or the matter plainly ignored.

28. Exception is taken with the H.O.'s inclusion of FOF #178 and request that it be struck from the record.

#178. In order to mitigate impacts to the cinder slopes below the WMKO complex and restore habitat for the Wekiu Bug, the Wekiu Bug Mitigation Plan was created based on recommendations from Pacific Analytics, a natural resources consultant. The plan specifies certain practices to follow during construction and operation. It also specifies how to restore bug habitat. Bell WDT at 4. There will be an entomologist as part of the project team. Bell Tr. 2/11/03 at 30:20-21 and 36:14-16.

The record reflects that the Wekiu Bug Mitigation Plan contains a proposal to create artificial habitat, not a habitat restoration, is based on untested methods and further relies on data challenged by the very expert witnesses who actually collected the data.

Additionally, all experts (in the record) do not agree on the best, if one indeed exists, model for habitat restoration.

TRADITIONAL, CUTOMARY, AND RELIGIOUS SITES, PRACTICES, AND USES

<u>Mauna Kea Summit, Religious Practices and Contemporary Practices</u>

29. Exception is taken with the H.O.'s characterization of Native Hawaiian Traditional and Customary Practices, as only contemporary and not rooted in history or tradition, which ignores the Expert testimonies of both Mr. Kepa Maly, Ms. Pua Kanahele, and testimonies of numerous Practitioners, which clearly establish the that modern practices are rooted in history, tradition and have time-depth, which in some cases date back to 1000 AD. See Petitioners FOF/COL at P. 39 below:

30. Exception is further taken with the H.O.'s omission and or failure to consider the following facts provided in the Petitioners' FOF/COL's at P. 38-47.

B. Continuity of History, Use and Practice

265."…information collected from two primary sources ---oral historical and consultation narratives, and archival literature. Cited documentation has been recorded over a period of more that 170 years, and covers many centuries of traditions….there is continuity and a number of similarities share between both forms of documentation. The continuity in the written and oral historical accounts, suggests that there is time-depth in many aspect of the cultural knowledge expressed and practiced by members of the present generations. (Expert Hawaiian Culture/History, K. Maly, WDT, P.4)

266. The native traditions and historical account cover a period from perhaps 1000 A.D., perhaps, actually earlier if go into the period of genealogy, cosmology…through the 1920's and 1930's where native writers and other historians were describing or relaying traditions of the mountain. (Expert Hawaiian Culture/History, K. Maly, TR., February 13, 2003, P. 83, ln.6-14)

258. "It's just a land feature to many people around the world. To us it's not just a land feature, it's our spiritual beginning, takes us back to Wakea." (Expert Hawaiian Culture/Practices, P. Kanahele, TR. Feb 12, 2003 P.55 at ln. 3-6)

260. Wakea and Papa, his wife, are the beginning of the Polynesian Race. We can all trace our genealogy back to them. (Expert Hawaiian Culture/Practice, P. Kanahele TR, February 12, 2003 P.49 at 12-13).

319. In the course of his study (Maly) identified a number of potential traditional cultural properties within the Mauna Kea Science Reserve Master Plan project area. These are historic properties that are of importance to Native Hawaiians because they possess traditional cultural significance derived from associated cultural practices and beliefs. …potential traditional cultural properties identified to Maly by knowledgeable informants and cultural practitioners…..(Exhibit A-10, UH3865) Traditional and Cultural Properties of Mauna Kea have been identified, they included but are not limited to the following:

1. The summit region from approximately 6,000 feet elevation to the Kukahau`ula (summit);

2. Many of the Pu`u [cinder cones];

3. View plane;

4. Mountain landscape in navigational traditions;

5. Lake Waiau and adjacent cinder cone;

6. Numerous Trail systems.

(Expert Hawaiian Culture/History, K. Maly, WDT at p.35-37)

272. The cluster of pu`u (cinder cones) forming the Summit of Mauna Kea have been identified by the State Historic Preservation Division ("SHPD") of the Department of Land and Natural Resources ("DLNR") as a Historic Property and the summit region of including most of the Mauna Kea Science Reserve has been

identified by SHPD as a Historic District. Both Historic Properties are eligible for listing on the National Historic Register. (Exhibit A-10, UH3856).

Section 106

31. Exception is taken with the H.O.'s consideration and comments regarding the National Historic Preservation Act- Section 106 process and Memorandum of Agreement (MOA) because, throughout the deliberations of the CCH, the H.O. DID NOT PERMIT any of Petitioners' witnesses to testify to the inadequacies of this project relative to either the National Environmental Policy Act (NEPA) or the National Historic Preservation Act-Section 106 MOA (NHPA-Section 106 MOA); nor did the Hearing Officer permit Petitioners' expert witness- Dr. King's Written Direct Testimony to be entered into the record.

Further, despite the fact that the University relies on and cites both NEPA and NHPA Sec. 106 to satisfy the State's HEPA, Historic Preservation, and Chapter 6E criteria, the H.O., contrary to the H.O.'s rules that both NEPA and NHPA-Section 106 were beyond the scope of the CCH, included UHIFA's results.
See February 25, 2003, Transcript at P. 70-84.

An additional problem rears its ugly head here, because NASA **is** a party to the NEPA and NHPA-Section 106 processes, while it is **not** a party in **this** process, how can data and approvals, if any, from such (the Section 106 process is still pending; See below) processes be utilized in this process (especially after the H.O. declared that these processes were beyond the scope of this process and Petitioners were not allowed to present any evidence related to them)?

Excerpts from the February 25, 2003, Transcript at P. 73, Line 1:

Ms. Pisciotta:	**We would like to have Dr. King qualified as an expert in traditional cultural resources management, and also the National Environmental Policy Act and Section 106. I've informed him that he must confine his testimony as well.**

And February 25, 2003, Transcript at P. 74, Line 1-16:

Hearing Officer:	**I'll find he is qualified in those areas, but my earlier rulings will stand, that he is not going to be allowed to give testimonies in those two other areas because that's outside the scope of this proceeding.**
Ms. Pisciotta:	**Okay, Dr. King, did you understand how—the limits of the testimony?**
Dr. King:	**Yes, I think so. That the matters dealing with the National Environmental Policy Act, the National Historic Preservation Act are beyond the scope of this hearing and so I am not to testify with regard to those authorities.**

We would like the record to reflect also that Dr. Thomas King

a. **Is the co-author of National Bulletin 38 guidelines for identifying traditional cultural properties for the National Register ?**
b. **Oversaw, the section 106 review for the Advisory Council on Historic Preservation (ACHP a National Federal Agency).**
c. **Helped to coordinate and draft the National Environmental Policy Act Proceeures for the United States General Service Administration.**
d. **Was awarded the U.S. Presidential award for the National Association of Envirnomental Professionals.**
e. **He has been involved in numerous projects involving the National Historic Preservation Act Section 106 and the National Environmental Policy Act.**

327. Petitioner MKAH: So would you say, in your professional opinion, that the cumulative impacts [of the Outrigger Telescopes Project] have or have not been addressed? (Bracketed information added)

Witness Mr. King: Certainly they—I can't see any evidence that they have. And the Simple answer, no, they have not, in my opinion."

32. Exception is taken with the H.O.'s omission and or failure to consider the following facts provided in Petitioners' FOF/COL regarding the NHPA-Section 106 at P. 73.

132. NASA is funding the Outrigger Telescopes Project. NASA is a Federal Agency. Therefore NASA is required to comply with both the National Historic Preservation Act (NHPA) and National Environmental Protection Act (NEPA).

134. The majority of Native Hawaiian organizations as defined by the National Historic Preservation Act that participated in the Consultations, did NOT sign the MOA, most notably the Office of Hawaiian Affairs, Mauna Kea Anaina Hou, the Royal Order of Kamehameha I, Hui Malama I Na Kupuna, and Hawai`i Island Burial Council did not sign the NASA Section 106 MOA. One organization (Ahahui Ku Mauna) signed the MOA, with the following caveats:

"We sign this MOA with the Understanding that it is not an endorsement of the proposed Keck Outrigger Project. In principle, we object to any paralleling activity in progress such as the State of Hawai`i conservation District Use Application, and this MOA as premature in the process of first obtaining project approval for this undertaking."
(Exhibit A-25, UH4152)

33. Exception is taken with the H.O.'s omission and or failure to consider the following facts provided by the Petitioners' FOF/COL at P. 73 regarding the National Environmental Policy Act (NEPA).

140. The UHIFA relies upon the EA prepared by NASA.

> The Office of Hawaiian Affairs ("OHA") has filed litigation in the United States District Court for the District of Hawai`i against Sean O'Keefe, in his capacity as Administrator, National Aeronautics and Space Administration, and Rolf-Peter Kudritzki, in his capacity as Director, University of Hawai`i Institute for Astronomy, Civil No. 02-00227 (SOM)(BMK). In that litigation, OHA alleges that defendants failed to meet requirements of the National Environmental Policy Act, as amended, 42 U.S.C. § 4321 et seq., and the National Historic Preservation Act (NHPA), as amended, 16 U.S.C. § 470.

141. We file the following **Judicial Notice**: The Civil No. 02-00227 (SOM)(BMK) (USDC) Motions are scheduled to be heard before the Honorable Susan Oki Mollway on **June 28, 2003**.

Again, the above-mentioned additional problem rears its ugly head here, because NASA **is** a party to the NEPA and NHPA-Section 106 processes, while it is **not** a party in **this** process, how can data and approvals, if any, from such (the Section 106 process is still pending; See below) processes be utilized in this process (especially after the H.O. declared that these processes were beyond the scope of this process and Petitioners were not allowed to present any evidence related to them)?

34. Exception is taken with the H.O.'s omission and or failure to consider the following facts provided by the Petitioners' FOF/COL at P. 71-74.

129. HRS §343-5(2)(f) states in part;

> Whenever an action is subject to both the National Environmental Policy Act of 1969(Public Law 91-190) and the requirements of this chapter, the office and agencies shall cooperated with federal agencies to the fullest extent possible to reduce to reduce duplication between federal and state requirements. Such cooperation, to the fullest extent possible shall include joint environmental statements with concurrent public review and processing at both levels of government. **Where federal law has environmental statements requirements in addition to but not in conflict with this chapter the office and agencies shall cooperate in fulfilling these requirements so that one document shall comply with all applicable laws**.

130. The UHIFA State EA and FEA are treated as one and the same under the HRS 343-5(2)(f).

131. The Office of Environmental Quality control (OEQC) Notice published March 23, 2002, stated [F]unding for the Project [Outrigger Telescopes Project] is from the National Aeronautics and Space Administration (NASA). (Brackets added) (Exhibit F-2)

137. NASA funded in-part both the KECK II of the WMKO Observatory as well as the TOTS [WMKO Temporary Test Sites]. NO Section 106 Consultation pursuant to Federal statutes was ever conducted for either project. (Exhibit F-8).

138. No NHPA compliance prior to this project was ever acquired by NASA.

142. If the EA were invalid under federal law, UHIFA would likely be enjoined from using the NASA EA for any purpose that would violate federal law (e.g., using the inadequate EA to obtain permitting for the Project).

143. The UHIFA can not prove they have met their burden under criteria set forth in HRS 183C, HAR 13-5-1, and other applicable rules and regulations that govern proper land uses of Conservation District and also the public trust lands of Mauna Kea.

148. Because the Keck Outrigger EA is under on-going (present) judicial review, there is insufficient information for BLNR to fulfill its affirmative duties in making its decision in this case. In the absence of such information the CDUA must be denied.

Compliance with H.R.S. Section 6E, Mauna Kea Historic Preservation Plan, Burial Treatment Plan

The record reflects, 1) previously identified Native Hawaiian burials of high historic value exist on Mauna Kea, 2) Mauna Kea is an identified historical and traditional burial ground, and that burial practices continue today, 3) Mauna Kea summit is a historic district and containing historic properties eligible for the listing on the National Historic Register, 4) and the University has leased from the BLNR the Mauna Kea Science Reserve there is NO BURIAL TREATMENT PLAN for Mauna Kea.

35. Exception is taken with the H.O.'s "Special Conditions #6, which states:

6. Notwithstanding any provision of Hawai`i Revised Statutes Chapter 6E to the contrary, if an inadvertent discovery of any human burial is discovered in the course of construction of the Project, the Applicant shall seek the advise and recommendation of *either* the Hawai`i Island Burial Council or a recognized Native Hawaiian Group selected by the Office of Mauna Kea Management for the treatment of the inadvertently discovered burial.

HRS Chapter § 6E-8 states:

> Review of effect of proposed state projects. Before any agency or officer of the State or its political sub-divisions commences any project which

may affect historic property, aviation artifact, or burial site, the agency or officer shall advise department and allow the department an opportunity for review of the effect of the proposed project on historic properties, aviation artifacts or burial sites, **consistent with section 6E-43 especially those listed on the Hawai`i register of historic places.**

HRS Chapter § 6E-43 (b) states:

Prehistoric and historic burial sites. (b) All burial sites are significant and shall be preserved in place until compliance with this section is met, except as provided in section 6E-43.6. The appropriate island burial Council shall determine whether preservation in place or relocation of previously identified native Hawaiian burial sites of high preservation value, such as areas with a concentration of skeletal remains, or prehistoric or historic burials associated with important individuals and events, or areas that are within a context of historic properties, or have known lineal descendants, shall receive greater consideration for preservation in place. The criteria shall be developed by the department in consultation with the councils, office of Hawaiian Affairs, representatives of development and large property owner interests, and appropriate Hawaiian organizations, such a Hui Malama I Na Kupuna O Hawai`i Nei, through rules adopted pursuant to chapter 91.

HRS Chapter § 6E-43.5 (f) in relevant part states:

The Councils shall:

(1) Determine the preservation or relocation of previously identified native Hawaiian burial sites;
(2) Assist the department in the inventory and identification of native Hawaiian burial sites;
(3) Make recommendations regarding appropriate management, treatment and protection of native Hawaiian burial sites, and on any other matters relating to native Hawaiian burials;

36. Exception is taken with the H.O.'s FOF # 272 at P.33.

#272. UH was required to comply with HRS Chapter 6E, entitled "Historic Presrvation." In a letter dated May 16, 2002, Don Hibbard of the State Historic Preservation Division confirmed that completion of the Section 106 process and the signing of the MOA satisfied the University of Hawai'i's obligation to comply with Hawai'i State Historic Preservation Law. Mr. Hibbard wrote, "In accordance with Section6E-8, Hawai'i Revised [S]tatutes the historic preservation office concurs with the proposed W.M. Keck Obseratory Outrigger project with the coordination that the stipulations set forth in section 106 MOA are followed." McLaren WDT at 21; Exhibit A39.

37. Exception is taken with the omission of the following facts provided in Petitioners' FOF/COL's at P. 68.

> **113.** SHPD pointed out that the process of leveling this area or covering it with excavated material from the KECK I site would not necessarily preclude the possibility of burials because they could lie at moderate depths below the natural surface. (Exhibit A-25, UH3929)

38. Exception is taken with the H.O.'s FOF/COL's and recommendations for the following reasons:

1) **The University has leased the Mauna Kea Science Reserve;**
2) **Previously identified burials reside in the Mauna Kea Science Reserve;**
3) **The University is the applicant for the CDUA Application for the NASA/KECK Telescopes Project;**
4) **The University was also the Applicant for most, if not all other Observatory/Telescopes Facilities-CDUP's;**
5) **The University has never prepared a burial treatment plan for the Mauna Kea Science Reserve;**
6) **The University has claimed (based on a letter from former SHPO, Don Hibbard) that the Section 106 MOA will satisfy the H.R.S Section 6E-8 regarding both Historic Preservation (*See* H.O. FOF #272 at P.33*);***
7) **The Office of Mauna Kea Management was created and established under the University's Master Plan 2000, but that Plan has not been reviewed or approved by BLNR.**

39. Exception is taken with the H.O.'s FOF # 274 at P. 34:

#274. The adequacy of the Mauna Kea Historic Preservation Plan was **not** disputed by any of the Petitioners.

The record reflects that: 1) The Plan referenced here was contained in the University's Master Plan and also in Appendix E; 2) the Master Plan 2000, which is not approved and was not considered in the CCH; and 3) according to the UHIFA the Section 106 MOA (which continues to be under consideration by the federal court) is what they have relied on to satisfy the Historic Preservation criteria.

BLNR has subject matter jurisdiction and an affirmative constitutional and statutory duty to assess and, insure Chapter 6E compliance is fulfilled.

40. Exception is taken with the H.O.'s omission and or failure to consider the Petitioners' FOF/COL's at P. 69.

> 115. Based on the above findings of fact regarding the UHIFA failure to prepare a burial treatment plan for the this Project or any other project on Mauna Kea, the

UHIFA **can not** prove their burden under **HAR §13-5-30(4) or** under **HAR 13-5-30(c)(8)**, or compliance with Chapter 6E of the State Historic Preservation Act.

VISUAL IMPACTS and View Planes/Visual Impacts

41. Exception is taken with the H.O.'s omission and or failure to consider the Petitioners' FOF/COL's at P.45-46 and P.67-68 .

View Plains, Visual Vistas--Mauka-Makai and Makai-Mauka and Open Spaces

307. Shrines were placed in prominent location with commanding views of the landscape. (Exhibit A-10, UH3847)

308. " You have to look at it from the east [image of Poli`ahu formed from the pu`u]. All the *pu`u's* line up. You see her face, her breast, her stomach, her feet. It is really a perfect image, a lot of times all you see is her body illuminated in the snow and Kukahau`ula courting her—he rides down on the sunbeam to be with her." (bracketed information added) (WDT Kealoha Pisciotta, in Poli`ahu Section)

309. "[When they destroy *pu`u* and build telescopes] they are altering the image of our deities…the physical manifestations of the divine, *kino lau*, and the bodily forms of the gods." *Id.*

310. "…the summit, the name of the summit, *Kukahua`ula,* comes from the *mo`olelo* of the god *Kukahau`ula* who courts *Poli`ahu*, he rides the sun beam to greet her everyday…it's also a true statement because Mauna Kea, as the highest point, receives the sunlight first. (Tr. K.Pisciotta-February 25, 2003, P. 176 at 18-24).

311. "The telescopes…are actually an obstruction of sight. Now when our kahuna go up there, they cannot turn 360 degrees and see all the places…they have to walk around the telescopes and that's inappropriate." (Exhibit F-5 in App. I-K at 6-7).

314. "...so when I went to the site where these ladies and gentlemen propose their telescope there is a part where I can see from Pu`u Hau Oki that `akala [alignment to Haleakala]…I can see Haleakala and I can see Haukea…but when I found that they were going to put this 30 or 35 foot high telescope I wouldn't be able to see

her from the either." (P.K.Neves, Tr., February 25, 2003, P. 138 at 19-25, P. 139 at 1-2)

101. Based on the above findings of facts, regarding **alterations of the sacred landscape,** the **UHIFA can not meet its burden** under **HAR 13-5-30(4), HAR §13-5-30(6)**, or **HAR§ 13-5-30(c)(8**).

102. Based upon the above findings of facts , regarding traditional, cultural and religious significance, practices and use associated with **Kaukahau`ula (the summit)**, the **UHIFA can not meet its burden** under **HAR §13-5-30(4), HAR §13-5-30(6)**, or **HAR§ 13-5-30(c)(8**).

104. The UHIFA claims the impacts to the view planes will not be significant. UHIFA never evaluated the view planes from the mauka-makai (summit-ocean), they only considered the makai-mauka (ocean-summit) view planes.

105. The UHIFA did not assess visual impacts, or view planes as a Traditional Cultural Properties relating to navigational practices, the impacts to the ceremonial and ritual practices that rely on the landscape and view planes.

106. The Outrigger Telescopes Project proposes to construct six (6) 35 foot high domes –each equivalent to 3 ½ story high buildings, around two (2) 135 foot each equivalent to about 10 story high buildings. This will affect thousands of people makai-mauka (ocean-summit) from all over the island. .

107. This project will effect the image of Poli`ahu.

108. The cumulative visual impacts of the Observatory have never been fully assessed.

109. There is nowhere on the ridge of Kukahau`ula (summit) to attain a 360 degree panoramic view.

110. Based on the above findings of fact regarding the makai-mauka and mauka-makai, view planes, the UHIFA, cannot prove its burden under HAR § 13-5-30(6), HAR §13-5-30(4) or under HAR 13-5-30(c)(8).

<u>WASTE WATER, CHEMICAL USE, HYDROLOGY</u>

42. Exception is taken with the H.O.'s assertion that UHIFA's witness Mr. Tom Nance "was more credible" than the Petitioners' witness Dr. Brad Finney.

43. Exception is taken to the fact the H.O. did not qualify Dr. Finney as a Hydrologist. Review of Dr. Finney's CV would show:

1) **Dr. Finney holds a Ph.D in Environmental Engineering. Hydrology is a sub-discipline of Environmental Engineering.**

2) **He teaches introductory and advanced hydrology courses at Humboldt State University.**
3) **He produced a 10-part instructional module on field hydrology techniques for the National Weather Service Hydrologist.**
4) **He received an award from the American Society of Civil Engineers for the best paper in the water resources planning and management division. The subject of the paper was "Surface and Groundwater Hydrology."**
5) **He has conducted groundwater modeling and field work on O`ahu, in Laie and in Haleiwa/Wailua. In addition, he has extensive experience in groundwater fate and transport modeling in the United Staes, Chile, Taiwan, the Peoples Republic of China, and Indonesia.**

The record should reflect that Petitioners flew Dr. Finney from the Mainland to come and testify in the CCH.

On the other hand, although, Petitioners were somewhat inexperienced in the *vior dire* process and did not challenge Mr. Nance's qualifications, Petitioners strongly maintain that Dr. Finney, with a PhD and extensive teaching, writing, and field experience should have been qualified as an expert. Mr. Nance may have experience (in golf course watering systems), but is not a PhD in any discipline, nor does he have any teaching experience at the university level or, as far as can be ascertained, writing experience.

Additionally, both on and off the record, Mr. Nance had to apologetically change his testimony and make corrections to the written reports he had submitted. Nance Tr and WDT.

44. Exception is taken with the H.O.'s omission and failure to consider FOF/COL regarding the traditional use and gathering of snow, ice and waters of Mauna Kea, impacts from hazardous materials, and sewage treatment, provided in Petitioners' FOF/COL at P. 69 and P. 34-37.

116. Snow, ice, fossil ice is and water is harvested from Mauna Kea for medicine. It is the healing waters…"(WDT, water section Kealoha Pisciotta)

117. Lake Waiau was ….esteemed for its waters that were harvested for medicinal, ritual and ceremonial. (Expert Hawaiian Culture/History, K. Maly, WDT, P.32

A. Hazardous Materials

222. Dr Fred Chafee of the WMKO and Dr. Robert McLaren of the Institute for Astronomy for University of Hawaii, both denied any use of Mercury at the WMKO at a October 27, 1999 Hawaii Island Burial Council meeting. They claim the Keck's float on hydraulic oil rather than mercury. (See Exhibit F-8 for dialog)

223. There have been 3 Mercury spills reported at the William M Keck Telescope. August 10, 1995, September 15, 1995, and November 6, 1995. (Exhibit F-49)

224. According to the documents produced pursuant to Minute Order No.'s 12, 16, and 20, there are numerous hazardous materials used and stored at the Observatories/Telescope Facilities atop Mauna Kea. These Observatories/Telescope Facilities include but are not limited to:

The William M. Keck Observatory ("WMKO") (Exhibit F-61)
The NASA Infrared Telescope Facility ("IRTF") (Exhibit F-60)
The Canada-France-Hawaii Telescope ("CFHT") (Exhibit F-62)
The Smithsonian Sub-Millimeter Array ("SMA") (Exhibit F-63)
The University Of Hawai`i 88" or 2.2 meter Observatory ("UH88") (exhibit F-64)
The Gemini North Telescope ("Gemini") (Exhibit F-65)
The James Clerk Maxwell Sub-Millimeter Telescope ("JCMT") (Exhibit F-66)
The United Kingdom Infrared Telescope ("UKIRT") (Exhibit F-66)
The Very Long Baseline Array ("VLBA") (Exhibit F-___)

225. The Hazardous materials listed below were found to be stored and used at the Observatories/Telescope Facilities they include but are not limited to, the following:
Hydrochloric-Acid (Note: not listed in JCMT Exhibit F-66)
Potassium Hydroxide
Hydraulic, Motor, and Lubricating Oils
Pesticides
Insecticides
Calcium Carbonate
Sulfuric Acid
Diesel, Jet Fuel, and Unleaded Gasoline
Ethylene Glycol
Kerosene
Paints, Thinners and Solvents
Rush Treatments and Inhibitors
Carbon Disulfide (listed only in Exhibit F-61)
Elemental Mercury (Note: used or stored in amounts beyond that contained in a household thermometer-were listed in Exhibits F-61, F-66, F-60, F-62 and F-64).

226. Carbon disulfide is currently listed in the WMKO MSDS List. (F-61)

227. UHIFA witness Ron Laub stated that carbon disulfide, methyl ethel ketone, toluene, and insecticides are not used at the WKMO. (Tr.R.Laub, February 11,2003, P 153 In 15-25)

228. The WMKO MSDS List, however, includes all of the above mentioned hazardous chemicals.(F-61)

229. Five Telescopes indicated that they stored and used elemental mercury in the amount beyond that stored in a thermometer.

2. Mirror washing and aluminizing chemicals:

230. The WMKO has open drain systems also known as "French Drains" (Tr. Bell, February 11, 2003, P. 16-25).

231. French drains enter directly into the ground under the WMKO. *Id.*

232. The WMKO has open-drains in floors of both the Mirror- Washing and Mirror Aluminizing Rooms. *Id.*

233. The WMKO one year ago installed a sump pump to collect the mirror washing wastewater, prior to one year ago various chemicals used for the mirror washing, where allowed to enter the drains that go directly into the ground. *Id*.

234. Some of the chemicals [used for mirror washing] include but are not limited to Carbon-Disulfide (bracketed information included] (Tr. Laub February 11, 2003, P. 168 In 17-25, P. 169 1-3).

235. Draft EA claims Carbon Disulfide is not used at WMKO, however, UHIfA Witness confirmed that it [WMKO] did in fact use it, it is very dangerous and used to go into drains. (Tr. R. Laub February 11, 2003, P. 153 In 15-25)

236. Applicant witness (Tr. J. Bell) confirms that the WMKO has Glycol transportation (intake/outtake) pipes that continuously transport the ethylene glycol from the nasmyth platform on the Telescope backing structure down to the lower basement floors of the observatory. These pipes are mounted against the wall directly above the French drain systems. (Tr. J. Bell, February 11, 2003, P. 61-62)

237. On November 3, 1995, sixty (60) to sixty-five (65) gallons of diesel fuel and engine/hydraulic fluid was spilled off of the summit road by an overturned construction truck. (Exhibit F-43)

238. On September 3, 1996, another ethylene glycol spilled occurred at the Subaru Telescope construction site. The release occurred when two (2) fifty-five (55) gallon drums split open after falling from a pallet being craned failed, dropping barrels from approximately thirty feet onto the cinders below. (Exhibit F-41).

3. Sewage

239. Approximately forty eight thousand seven hundred fifty (48,750) gallons of human waste is generated per month by the observatories/telescope facilities on

Mauna Kea. That is about five hundred thousand (585,000) gallons per year. (Exhibit A-70)

240. All of the Observatories/Telescope Facilities use a combination of Septic Tank/Cesspool/Leach field Systems. The older Observatories use only Cesspools. (Exhibit A-70).

241. Correspondence to the Gemini Observatory and WMKO from the State Department Health regarding the "approval for use of individual waste water systems" indicates that department approval does not guarantee that individual waste water systems will function or perform properly for any given period of time, and that it is the responsibility of the owner to perform proper maintenance of wastewater systems which includes but is not limited to inspections of sludge and scum levels on an annual basis. (Exhibits F-55 and F-56).

242. Blank septic tank records were provided by UHIFA (Exhibit F-55, UH bate stamped UH00243, and Exhibit F-56, bate stamped UH00133 and UH00003).

243. According to the documents produced pursuant to Minute Order No.'s 12, 16 and 20, no evidence was produced by the UHIFA or any observatories/telescope facilities (except the Subaru Telescope in Exhibit F-57) that demonstrated that any inspections, maintenance, or pumping of the waste water systems has occurred since 1994.

244. The potential for effluent amounting to 40-80 gallons per day, per telescope, to flow from uncontained cesspools and septic systems, "that might affect Lake Waiau" as well as 60-120 gallons per day, per telescope, for heating, cooling and consumption is cited in the F-30 MKSRCDP p 38)

245. The MKSRCDP identifies cesspools and septic tanks with leaching fields as a means of sewage disposal. The plan identifies the potential risk of effluent discharge to Lake Waiau, craters and cinder cones and recommends appropriate siting. It further recommends monitoring on a continuing basis to identify and control adverse environmental impacts. No data is in evidence to indicate that continuing monitoring and remediation implementation have been conducted. (F-30 p 69)

246. The university provided documents including "Approval for use Individual Wastewater System (IWS") dated May 19,1994, outlining the responsibility of the owner to periodically inspect, annually check sludge and scum, periodically remove and checking for signs of clogging and ponding. Records must be kept of the IWS inspections as well as sludge and scum removal. The records shall be available for inspection by the Department. (BS UH00131)

247. The university provided "Septic Tank Inspection Record" for the WM Keck Observatory, but the data section is blank, indicating that no records were kept, and no records are on file for inspection. (BS UH 00133)

248. During the 1997/8 wekiu bug survey, the crew discovered that a relatively large amount of effluent material had escaped from a vent pipe below Subaru and a streak on a snow patch, lava, and tephra surface that was 15 feet long and spread out 3-4 feet at the terminal end. Since it was soaking in, much of the material had already gone into the surface. Though reported to authorities, it was not cleaned up within 24 hours. (Howarth Rebuttal testimony 2/24/03 p.27)

119. The cumulative impacts to the traditional and cultural properties and associated traditional and customary Native Hawaiian practices resulting from the storage, use, and release of the large quantities hazardous materials has not been assessed.

120. **Based on the abovementioned facts regarding the traditional and customary practices, the use of the sacred waters, snow and ice from Lake Waiau and summit region, the, impact upon those resources from the injecting of approximately 50,000 gallons of sewage per month into cesspools, septic tanks with leach fields into the summit, or the significant impacts from hazardous waste spills; the UHIFA can NOT prove their burden that the land use "will not cause substantial adverse impact to existing natural resources within the surrounding area, community or region" under HAR §13-5-30(4) or that the Project "will not be materially detrimental to the public health ….and welfare" under HAR 13-5-30(c)(8).**

Contemporary Cultural Practices and Access

44. Exception is taken with the H.O.'s omission and or failure to consider the following facts provided by Petitioners' FOF/COL's at P. 49.

45. Exception is taken with the H.O.'s FOF #304 at P. 37:

> **"The disassembly of Ms. Pisciotta's family 'ahu by astronomy personnel in 1997 was done because of a very unfortunate error in the universities procedures at that time. The employee did not understand the significance of the site and was following instruction to remove foreign objects and structures left behind by visitors. (McLaren WRT at 5; and McLaren Tr., 2/12/03, p. 248:..17-23)**

46. Exception is taken with the H.O.'s full-scale acceptance of the controverted UHIFA's FOFs and COL's regarding Ms. Kealoha Pisciotta's Family `ahu (shrine) destruction.

Ms. Pisciotta testified under oath, that her family shrine has been both desecrated and removed 3 times, two times by University personnel and the third

time by unknown party or parties -- it was removed-it was never returned-and is still missing. Ms. Pisciotta placed another family stone in the same place and it too was desecrated (even family burial remains were disturbed) by University personnel year 2002. Clearly, there is continued injury.

The H.O. provides no reasons or proof to justify his determination that the University's testimony is more credible and should somehow prevail over Ms. Pisciotta's own. This specific incident is well documented (DoCARE and HPD) and although the UHIFA has apologized for the first and second incident, the incident last year that again involves UH personnel clearly demonstrates that no effective policy changes have been implemented and no remedy is forthcoming. Ms. Pisciotta testified under oath that she has two witnesses other than herself to support her testimony.

330. One native Practioner's family `ahu (shrine) was desecrated and destroyed on 3 separate occasions by University Personnel. It was removed twice by University Personnel…the first time it went to the Hilo Dump…and…I recovered it…the third incident, I don't know who took it….this Pohaku is still missing, it has not been recovered. And some family members gave me another Pohaku…and that one was also desecrated last year by University Personnel…The fact that it was taken by University personnel, and again even last year means that we still have no protection…there are hundreds of shrines, and what is of concern here is that I do not know if the same people who are removing my shrine are removing other shrines…Some of those shrines are hundreds it not thousands of years old and they are important to the sacred landscape. (Tr. K. Pisciotta, February 25, 2003, P. 160-163)

47. Exception is taken with the H.O.'s FOF's #308 and #310-312. They are based on hearsay.

#308. On January 20, 2002, Mauna Kea was closed to the general public for compelling safety reasons, the presence of ice and snow on the road andparticularly because snow removal equipment was working on the roadway, which poses a potential hazard to vehicular traffic. Stormont WRT at 1.

#310. On January 20, 2002, OMKM Rangers recorded that there were over 100 cars waiting to proceed up Mauna Kea. OMKM treats all members of the public the same particularly when safety is at issue. An unmanageable and chaotic situation would result at roadblocks if certain members of the public were allowed to proceed while others were not. It is not OMKM's nor the Master Plan's intent to restrict access to the general public. It is only reasonable to expect that the road will be closed from time to time due to unsafe or impassable conditions. Stormont WRT at 1-2.

#311. When the snow removal equipment is n the road, it blocks off an entire lane and vehicles are required to drive around it. Therefore only a limited number of vehicles can be accommodated on the road while the snowplow and snow blower are operating.

Observatory staff are properly equipped, experienced and knowledgeable regarding how to safely proceed around the snow removal equipment. Even though they are experienced, observatory staff are permitted access only when it is safe for their vehicles to proceed and when there are cleared areas on their property to park their vehicles. Stormont WRT at 2.

#312. On January 20, 2002, as sections of the road were cleared of ice and snow and deemed safe for vehicular traffic, those sections were opened to the general public. Stormont WRT at 2.

The record reflects at P.234-235, that Mr. Stormont was not on the Mountain on January 20, 2003, therefore was not present to verify these facts.

Additionally, the distinctions between the general public, native Hawaiian cultural practitioners, and astronomy personnel and their qualifications for navigating in snowy conditions need to be clarified.

48. Exception is taken with the H.O.'s omission of the complete statement's contained in Petitioners' FOF# 329 at P. 49-50.

329. My access was blocked by University personnel (tour-guides-while trying to ascend Mauna Kea to collect/harvest medicine for Kupuna Genesis LeeLoy, and Aunty Margaret Machado, on January 20, 2003). The University Personnel block access in two places on the Summit Access road at eh (9,000 foot elevation at Hale Pohaku) and below the Lake Waiau. We witnessed University Personnel permitting Telescope vehicles but not the Public or [Native Hawaiian] Practitioners. (Bracketed information added)(WDT, D. Keomailani Von Gogh).

The record reflects, that relevant sections including the denial of public access and practitioner's access to collect traditional medicine. It is also important to note that Astronomy personnel were NOT denied access at that time.

FLORA AND FAUNA

49. Exception is taken with the H.O.'s omission and or failure to consider the following facts provided by the Petitioners' FOF/COL's at P. 63.

Cumulative Impacts on the Wekiu Bug

73. Hawai`i Constitution, Article 12, Section 1. **For the benefit of present and future generations, the State and its political subdivisions shall conserve and protect Hawaii's natural beauty and all natural resources**, including land, water, air, minerals and energy sources, and

shall promote the development and utilization of these resources **in a manner consistent with their conservation** and in furtherance of the self-sufficiency of the State.

All public natural resources are held in trust by the State for the benefit of the people.

74. The Wekiu Bug is found nowhere else in the World

The BLNR has a fiduciary obligation to protect the natural resources and cultural practices on Mauna Kea under the public trust doctrine, independent of its statutory duties under HRS Chapter 183C regarding conservation districts. Under the Hawai`i Constitution, the State has a public trust duty to conserve and protect "public natural resources" for the benefit of present and future generations:

75. The auditor noted that the university commissioned a study of the arthropod only after the damage had been done. (Exhibit F-23 Audit of Management, p 24)

76. The Outrigger Telescope Project will adversely impact the Wekiu Bug.

77. Much of the Wekiu Habitat has already been destroyed.

78. It is not known how the mitigation plan will affect the Wekiu bug, and that the mitigation may likely harm or create “death traps” for the Wekiu bug.

79. The Applicants expert witness could not confirm that any tests to determine how the restoration habitat would affect the Wekiu bug were ever conducted.

80. The substantial adverse impacts include the effect of an untested and untried mitigation plan that would be conducted in parallel with the construction of the Outrigger Telescopes.

81. No cumulative impacts to the Wekiu bugs habitat has been assessed.

82. Based on the abovementioned information relating to the Wekiu Bug Habitat Restoration Plan contained in Appendix E the UHIFA can not prove their burden that the proposed land use is consistent with the purpose of the Conservation district under HAR §13-5-30(1), will not cause substantial adverse impact to existing natural resources within the surrounding area, community or region under HAR 13-5-30(4) or that the Project “will not be materially detrimental to the public health ….and welfare” under HAR 13-5-30(c)(8).

Additionally, information and data provided by Pacific Analytics, on which the Wekiu Bug Habitat Restoration Plan is based, has been controverted by Stone and cannot be accepted at face value. Stone WDT to Appendix E.

ARTHROPODS

Exception is taken with the H.O.'s FOF/COL's#320-420 P. 39-53, regarding the wekiu bug. Exceptions to specific FOF's will be addressed in the following sections.

50. FOF # 330 at P. 40. "Dr. Brenner testified that Wekiu bug counts were high in 1982 "…even though 6 telescopes had already been installed at the summit, and most of the roads were already constructed." Brenner WDT at 30.

This statement should be excluded because it falsely implies that construction prior to 1982 was greater than post-1982, and that construction did not impact the Wekiu bug counts.

1. This statement by Brenner was refuted by Stone in his WDT at 7--8 and Exhibits 5and 6, in his RT at 2 and 3 of Brenner's WDT, and in his OT on Feb. 24, 2003 at 105-110.

2. "The area of Wekiu bug habitat that was severely impacted after 1982 was clearly shown to be far greater than the area impacted pre-1982 in maps and photos. Map #1, Exhibit F-30 at 56; Map #2, Exhibit A-10 at IX-19; Map #3, Exhibit F-34; Map #4, Exhibit F-30; Exhibit F-35, photos 1-7.

51. FOF# 331 at P. 40. "The area of the WMKO site that was leveled for construction of the Keck I and Keck II Telescopes. . . does not harbor substantial resident populations of any of the eleven resident Hawaiian arthropod species . . .

1. This is the area of the summit ridge of Pu`u Hau Oki that had extremely high Wekiu bug numbers in the 1982 survey. Over 30 feet of this ridge was removed during the Keck telescope construction, and deposited on the upper crater slopes, severely impacting both the upper ridge and the critical slope habitat of the Wekiu bug. Additional severe impact was done to Pu`u Hau Oki during construction of the Subaru Telescope, with excavated material dumped in the crater bottom and leveled and compacted. Part of this leveled and compacted area is included as Wekiu bug "habitat restoration". However **none of these impacts were included in the "Cumulative Impact" sections of the NASA EA, the State UHIfA EA, or the 2000 Summit Master Plan EIS. (highlights added)** Exhibit A-25, Bates stamped 3905, 4086-4087.

2. "On site construction and installation of an air pipe and retaining wall needed for slope stability at JB-5 near Outrigger Telescopes 2 would result in a loss of a small amount (0.003 ha (0.008 ac)) of the sloped cinder cone wall that contains Wekiu bug habitat." Exhibit A-25, UH IfA EA Bates Stamped 4006, para. 5, (identical to NASA's EA at 44).

3. "On site construction and installation of Outrigger Telescopes 3 would disturb a small amount (0.006 ha (0.015 ac)) of Wekiu bug habitat. However, no Wekiu bug habitat restoration can occur here because of the severity of the slope and the cinder necessary to restore the area would spill over onto undisturbed habitat." Exhibit A-25, UH IfA EA Bates Stamped 4006, para. 6, (identical to NASA's EA at 44).

4. "On-site construction and installation of Outrigger Telescopes 2, 3, and 4, however would also involve activities on the previously disturbed sloped wall area of the cinder cone immediately adjacent to the leveled area of the WMKO site. While the sloped areas of the cinder cone wall adjacent to the WMKO site were previously disturbed during construction of the Keck I and Keck II telescopes, Wekiu bugs were determined by the 1997/98 survey (Section 3.6) to be inhabitants of the sloped cinder cone walls near Outrigger Telescopes 2 and Outrigger Telescope 3." Exhibit A-25, UH IfA EA Bates Stamped 4070, para. 1, (identical to NASA's EA at 108).

5. "On-site construction and installation of an air pipe and a retaining wall needed for slope stability t JB-5 near Outrigger Telescope 2, and at Outrigger Telescope 3 would result in loss of a small amount of the sloped cinder cone wall that is Wekiu bug habitat in those areas. Specifically, at JB-5 near Outrigger Telescope 2, the air pipe and retaining wall would extend into and displace about 0.0003 ha (0.008 ac) of the sloped area habitat (CARA 2001) (see Figure 2-10). At Outrigger Telescope 2 the air pipe and retaining wall would displace about 0.006 ha (0.015 ac) of the sloped wall area Wekiu bug habitat (see Figure 2-12)." Exhibit A-25, UH IfA EA Bates Stamped 4070, para. 2, (identical to NASA's EA at 108).

52. FOF # 332 at P. 40. "Although Stone offered opinions regarding cumulative impacts of observatory construction, he only reviewed the NASA Final EA, not the UH IfA final EA, which contained additional discussion regarding cumulative impacts." Stone WDT at 2; Exhibit A25 Bates stamp 3905-4085,

This statement is incorrect in fact and substance. However, the FOF should include a statement that neither IFA nor NASA has conducted a cumulative study of the impacts of observatory construction on Wekiu bug habitat in Pu`u Hau Oki.

1. As an expert witness, Stone presented written evidence, maps and photographs documenting the cumulative impacts of telescope construction on Pu`u Hau Oki, and he clearly presented this evidence in his oral testimony. Stone WDT at 7 and 8, Exhibits 5-8; Stone RT at 2 and 3 to Brenner's WDT, Stone OT 24 Feb 2003 at 105--110. This testimony demonstrated that the cumulative impacts on Pu`u Hau Oki of the Keck and Subaru telescopes were significant. Stone was not asked whether he had reviewed the UH IfA final EA. Therefore, this statement assumes facts not in evidence. Had he been asked, Dr. Stone would have testified that he had reviewed the UH IfA final EA and that his opinions were the same.

2. Stone DID review the UH IfA final EA, Exhibit A25, as well as all of the exhibits submitted, and not "only … the NASA final EA …" The documents listed in Stone WDT at 2 were not an exclusive list, nor was he asked whether he had read any additional documents.

3. Of the IfA Bates stamped documents 3905-4085, only TWO of these pages, 3905 and 4085 contain Cumulative Impact sections (an additional two pages, 4086-4087 are part of the Cumulative Impact section that were curiously OMITTED in FoF 332):

Pages 3962 – 4085 are IDENTICAL in the two documents (the NASA EA is given as Appendix A of the IfA EA). Of these pages, ONLY page 4085 covers "Cumulative Impacts", but this section continues to the next two pages bate stamped 4086, 4087.

Of pages 3905 – 3961, section G. "Cumulative Impacts" is ONLY on page 3905. Therefore, pages 3906—4084 cited in this number ARE NOT an assessment of cumulative impacts.

4. Page 4085 (and 4086-4087) "Cumulative Impacts" discusses ONLY proposed future impacts. It does NOT have any assessment of the impacts of past telescope construction on the Summit area or of the Keck and Subaru telescopes on Pu`u Hau Oki. Dr. Stone and Dr. Howarth testified that a comprehensive understanding of past cumulative impacts is necessary before any further habitat destruction – even the relatively small amount proposed for the WM Keck Outrigger Telecopes – occurs. Stone WDT at 7, Stone OT 105-110; Howarth OT 24 Feb 2003 at 81-82.

5. 332 states ". . .the UH IfA Final EA **contained additional discussion regarding cumulative impacts.**" The ONLY additional discussion is three paragraphs on p. I-11 BS 3905. No substantially new material is presented here. It DOES NOT present a comprehensive assessment of cumulative impacts. It does not assess the cumulative impacts to Pu'u Hau Oki of the two Keck telescopes, covered by Stone's testimony and exhibits. It superficially discusses proposed future developments, and then refers to the Mauna Kea Science Reserve Master Plan Final EIS for a full discussion of cumulative impacts.

6. The Master Plan Final EIS is Exhibit A-7. This EIS does NOT include a comprehensive assessment of cumulative impacts. Section 6 is titled "Potential Impacts and Mitigative Measures", Bate Stamped 2322—2351. It covers ONLY potential FUTURE impacts of summit development. There is NO assessment of PAST impacts of the Keck and Subaru telescopes on Pu`u Hau Oki. Exhibit A-7 at Bates Stamp 2322—2351.

7. In his WDT at p. 7 and 8 Stone describes the PAST cumulative impacts due to construction of the Keck and Subaru telescopes and related infrastructure, and included Exhibits 5 and 6 documenting the cumulative impacts, based on a report and letter written in 1996. Therefore, IfA and NASA had ample time to

include these demonstrated impacts in the Master Plan Final EIS and in the Keck Outrigger Federal and State EAs. However, these documented impacts are erroneously dismissed here as being "opinions".

8. Stone included in his WDT Exhibit 8, a letter dated Sep. 25, 1996 from Mike Wilson, then Director of DLNR, in which he concurs with the evidence Stone presented on the impact of telescope construction on Pu`u Hau Oki, and states that he has ". . . asked UH IfA to review its present construction projects with oversight from DLNR staff, to ensure that all work is proceeding in accordance with the guidelines of the FEIS with respect to avoidance of arthropod fauna." (Stone Exhibit 8 at 4) This is the SAME evidence Stone presented in his WDT, RT, OT and Exhibits 5 and 6. Yet UHIfA and NASA **omitted all mention of this past cumulative impact to the area in the federal NASA EA and State UH IfA EA and in the 2000 Summit Master Plan EIS.** Exhibit A-25 Bates Stamped 3905 and 4805-4807; Exhibit A7 Bates Stamped 2325.

52. FOF # 333 at P. 40. Erroneously states that "Dr. Stone had not reviewed the 2002 Bishop Museum survey . . ." and ". . . also failed to review a 2001 Wekiu bug survey by Dan Polhemus . . ." Exhibit F-44 at 4/F-44 at App. 1 p. 2

This statement is false and should be excluded because it assumes facts not in evidence.

1. Stone reviewed both of these surveys prior to the Hearing, and was fully aware of their findings. He included in his testimony only the surveys that included the Pu`u Hau Oki area that includes the proposed Keck Telescopes. In the Oral Testimony examination and Cross Examination, he was NOT asked about either the Polhemus survey of Pu`u Hau Kea or the Bishop Museum 2002 survey. Therefore, Stone is being faulted here for not including surveys that were NOT done as part of the Keck Outrigger Telescope CDUA, and were NOT brought up by UHIfA lawyers in cross examination.

2. In addition to reviewing the Polhemus report, he discussed the survey directly with Dan Polhemus at the International Conservation Biology meeting in Hilo in August, 2001, and with Betsy Gagne, Executive Secretary of the Natural Area Reserves which includes Pu`u Hau Kea. Stone also attended a meeting at DLNR specifically to discuss the Polhemus survey and the future Wekiu bug surveys on Mauna Kea. This meeting was attended by, among others, Betsy Gagne, (Dan Polhemus), Frank Howarth, Mike Richardson of USFWS, and Stephanie Nagata from OMKM. Greg Brenner was included through a telephone hook-up. On Mar 22, 2002, Stone met with Greg Brenner, Betsy Gagne, Bill Stormont, Steve Miller (of USFWS) and Deborah Ward at the offices of OMKM in Hilo. The subject of the discussion was the status of the Wekiu bug, including the Polhemus study, and to plan for the future Wekiu bug surveys, including the 2002 survey. All of these meetings are in the public record, which the Hearings Officer may take judicial notice of, and show that Stone was not only well aware of the Wekiu surveys, but was an active participant in meetings about them.

3. Survival of Wekiu bug populations at high levels in Pu`u Hau Kea offers good comparative evidence for the serious negative effects of cumulative impacts in Pu`u Hau Oki on the drastic decline of the Wekiu bug there. (FoF 327)

53. FOF # 334 at P. 41. ". . . Wekiu bug population may be increasing or at least stabilizing at some new level. Recent surveys have also shown that Wekiu bug distribution is far more extensive than previously thought." Brenner WDT at 4.

This statement is speculation by Brenner and should be excluded. Even if true, this would not change the mitigation plans or monitoring plans that are proposed for the Keck Outrigger project.

1. The evidence for the "far more extensive" distribution of the Wekiu bug is the survey by Englund et al in 2002 (Exhibit F-44). In the executive summary of this survey, Englund states: "Wekiu bugs were infrequently collected, occurring preferentially along the upper rim areas of suitable cinder cones within the alpine zone of Mauna Kea. **Evidence for the rarity of wekiu bugs is demonstrated by the fact that despite 398 total trap days of effort during this study, only 47 wekiu bugs were captured."** (Exhibit F-44 at iii; Emphasis added)

2. There is still no or very little data on Wekiu bug life cycles, reproduction rates, behavior, movement, and distribution. (FoF 322) It is premature to make conclusions about Wekiu bug populations in the absence of this basic information about the bug. Drastic fluctuations in the numbers of Wekiu bug captured in Brenner's traps from day to day and season to season point out the lack of understanding of Wekiu bug behavior and the difficulty of drawing conclusions about population sizes. (Stone OT at 114-117, Exhibit A-29 at 14)

3. Longer term monitoring is needed before statements can be made about Wekiu bug population increase. Since the monitoring called for in 1983 was not done, long-term comparative data on which these conclusions could be based is lacking (FOF 326). At the present time, it is not possible to determine whether the apparent Wekiu bug increase is due to short-term favorable weather conditions or longer-term population increases. (Howarth RT at 2, item 3 to Brenner WDT)

4. It is not made clear how the more widespread Wekiu bug distribution found in 2002 relates to the proposed Keck Outrigger project on Pu`u Hau Oki. Is NASA/UHIfA planning to broaden the scope of the Keck Outrigger CDUA to include the entire summit area, including the Ice Age Natural Area Reserve? In that case, the broader distribution would be relevant. Then, the CDUA should also include a more detailed cumulative impact assessment of the entire area. However, if only the area of the Keck Outrigger permit is considered, the Wekiu

bug populations of the entire summit should not be cited as a reason for permitting further impacts to the Pu`u Hau Oki population.

54. FOF # 336 at P. 41. "Wekiu bug habitat is thought to be limited to the 12 to 18 inches of washed and size-sorted cinder on the surface and slopes of the Mauna Kea cinder cones above 11,800 feet." Brenner WDT at 5

This statement is not based on factual evidence. None of the field studies have focused on controlled, comparable research design that would correlate Wekiu bug abundance with depth of cinder. Furthermore it contradicts FoF #324.

1. Testimony by Howarth and Stone showed that there is NO field data on the preferred depth of cinder of the Wekiu bug. This data is NOT in the 1982 evidence as indicated by Brenner in 336. Howarth and Stone testified that their observations show that DEEPER cinder layers on crater slopes are critical for Wekiu survival. Howarth stated "We know of no data, published or not, that support the contention that a depth of 12-18 inches of cinders is limiting." Howarth RT at 2 to Brenner WDT; Howarth OT at 22-24; Stone RT at 4 to Brenner WDT;

2. In his RT at p. 3 to Appendix E, Howarth states: "There is no basis for the 12 to 18 inch depth of cinders, except that that was the maximum we dug into the substrate. And in fact, the behavior of the bug suggests that the presence of a slope is critical and that the effective depth of the cinders from the bug's view is the height of the slope." Howarth RT at p. 3 to "Appendix E"

3. Nowhere in Howarth and Stone 1982, Howarth, Brenner and Preston 1999, nor Englund, et al. 2002 is data given supporting the contention that 12-18 inches of cinder is the desired depth for the wekiu bug. Howarth RT at 5, item 9

55. FOF 337 at P 41…"Wekiu bugs have been found to be most abundant in this habitat where there are stable accumulations of loose cinder and tephra rocks large enough (1 cm and larger) to create interstitial spaces that allow Wekiu bugs to migrate downward to moisture and shelter." Brenner WDT at 5

Howarth in his direct testimony gave an estimate for the minimum size of cinders that would permit movement of the Wekiu bug at about ¾ inch (almost 2 cm.), twice as large as the estimate proposed here, and also stated that ". . . much larger stones (greater than a foot) are preferred." Howarth RT at 2, item 2

56. FOF # 343 at P. 42. "It is unlikely that the Outrigger Telescopes Project will have any long-lasting impacts to Wekiu bugs." Brenner WDT at 11

This statement should be excluded because it is based on speculation, and assumes facts not in evidence. The evidence for causes of Wekiu bug population

change and results of construction on the populations is lacking because there was NO monitoring between 1982 and 1997 during the period of major decline in the summit Wekiu populations, and there was NO cumulative impact study to determine the effects of the Keck I and II and Subaru telescopes on the Wekiu habitat in Pu`u Hau Oki. (Stone WDT at 7-8)

57. FOF #345 at P. 42. "In the area near JB-5 which services Outrigger Telescope 2, there will be approximately 350 square feet of habitat disturbance. In order to conservatively over-estimate the amount of habitat disturbance, however, a 310 foot buffer zone within a snow fence is included in the 350 square foot area of disturbance. Brenner Tr., 1/12/03, p 11625-117:13; Exhibit A42.

By modifying the accumulation of snow, the proposed snow fence will have an indirect impact on Aeolian drift (critical in providing food resources to the wekiu bug habitat) that could extend far beyond the fence itself. Howarth RT at 4, para. 2

58. FOF # 355 at P. 44. "The goal of Wekiu bug habitat restoration is to replace habitat disturbed by on-site construction and enhance Wekiu bug populations by increasing the amount of available habitat."

This gives the false impression that habitat will be "restored" to a natural, pre-construction state. In fact, the lack of a cumulative impact study of Pu`u Hau Oki means that there is no quantitative or qualitative description of the state of the natural habitat prior to the Keck I and II and Subaru telescope construction. The habitat "restoration" consists in placing washed cinder on top of previously substrate that was leveled, covered with fill, and compacted. Stone WDT at 4-7

59. FOF # 356 at P. 44. See comments for FOF 336 above

60. FOF # 358 at P. 44. "The habitat restoration protocol is based on the best scientific information available about the habitat needs of the Wekiu bug, and during the development of the protocol all information contained in scientific literature was considered. (Cites nine studies that "have provided information about the habitat requirements of Wekiu Bugs). Brenner WDT at 15-16. Exhibit A-25 at Bates Stamp 4069.

1. This gives the false impression that the habitat requirements for the Wekiu bug have been a major focus of the many studies cited. On the contrary, NONE of these studies has examined in any detail the issues of critical depth of cinder for Wekiu bug survival, the minimum and maximum size of cinder necessary, the relation of Wekiu bug reproductive needs to habitat characteristics, the foraging capability of the Wekiu bug to habitat or the critical habitat for Wekiu bug survival at night or during inclement weather when it is NOT foraging. Habitat characteristics were included in some studies, but in a purely descriptive manner rather than with statistically valid comparisons using controls.

2. For example, the 2002 study by Englund et al. cited here (Exhibit F-44) had three major objectives: 1) survey for the presence or absence of wekiu bugs at the summits of various pu`u's (cinder cones located in the alpine zone of Mauna Kea, 2) determine the elevational distribution of wekiu bugs on Mauna Kea, and 3) assess whether different pitfall trapping methods used in earlier Bishop Museum surveys provide comparable data in regard to wekiu bug capture rates. (Exhibit F-44 at p. iii)

3. Conversely, some inferences can be made on habitat needs of the wekiu bug from these previous studies, and at least 3 of the reports [Howarth & Stone, 1982, Howarth et al. 1999, and Englund et al. 2002] described or refined our understanding of the wekiu bug's habitat requirements. Contrary to the assertion in #358, the proposed habitat restoration protocol is not based on the best scientific information since it is not supported by the results of the previous studies. Howarth RT at 5, items 8 and 9

4. UHIFA has the burden of showing that NASA's proposed mitigation would work. It cannot rely on scientific guesswork. *See National Parks & Conservation Ass'n v. Babbit*, 241 F.3d 722, 736-37 (9th Cir. 2001*)* (absence of data supporting the habitat restoration plan does not excuse agency from further study when there is a reasonable possibility that the data could be obtained; speculative and conclusory statements insufficient to demonstrate that mitigation measures will be effective), *cert. denied, Holland Am. Line-Westours, Inc. v. National Parks & Conservation Ass'n*, 534 U.S. 1104 (2002); *Idaho Sporting Congress v. Thomas*, 137 F.3d 1146, 1151 (9th Cir. 1998) (mitigation plan should be supported by analytical data); *Northwest Indian Cemetery Protective Ass'n v. Peterson*, 795 F.2d 688, 697 (9th Cir. 1985), *rev'd on other grounds*, *Lyng v. Northwest Indian Preservation Ass'n*, 485 U.S. 439 (1988) (agency must analyze mitigation measures in detail and explain how effective they would be); *Oregon Natural Desert Ass'n v. Singleton*, 47 F. Supp. 2d 1182, 1194 (D. Or. 1998) (EA did not reveal how mitigation measures would compensate for adverse environmental impacts); *Morgan v. Walter*, 728 F. Supp. 1483, 1488-92 (D. Idaho 1989) (Ezra, J.) (requiring additional study where there was uncertainty regarding efficacy of artificial habitat for candidate species); *National Wildlife Fed'n v. Babbit*, 128 F. Supp. 2d 1274, 1302 (E.D. Cal. 2000) ("Where there is uncertainty regarding the success of mitigation measures, NEPA's approach to such uncertainty is to require an EIS."); *Coalition for Canyon Preservation v. Slater*, 33 F. Supp. 2d 1276, 1280 (D. Mont. 1999) (FONSI inappropriate absent scientific analysis that regeneration habitat for rare tree would work).

61. FOF # 359 at P. 45. See comments for FOF 368 below.

62. FOF # 360 at P. 45. "The habitat restoration protocol is based on the fact that Wekiu bugs habitat occurs on crater floors of summit cinder cones. Wekiu bugs are found on the crater floors of Pu`u Hau Oki and Pu`u Wekiu. In 1982, 6,230 Wekiu bugs

were collected on the crater floor of Pu`u Wekiu and 430 Wekiu bugs were collected on the crater floor of Pu`u Hau Oki." Brenner WDT at 16; Brenner Tr., 2/12/03, p 127:20-23.

This FOF is based on erroneous interpretation of data, and should be excluded.

The assertion that 6,230 bugs were captured "on the crater floor of Pu`u Wekiu" in the Howarth and Stone 1982 study is false. During Howarth oral testimony IfA was not able to produce documentation in support of the number. Their "datasheet" from "1982" was a recent computer printout of uncorrected summary data. (Howarth OT at 75;9-78;4) Howarth field notes from that study, show that the closest trap to the crater bottom was set "in the loose cinders at the base of a cinder slope near the bottom". (Howarth OT at 7410-75;1) This is not to say that Wekiu bugs do not forage on crater bottoms. As Howarth outlined in his rebuttal testimony, the evidence suggests that they forage on crater bottoms but need to retreat to suitable refuge habitat (i.e., cinder slopes), during inclement weather. . Howarth RT, at 10, last paragraph

The assertion regarding bugs in the bottom of Pu`u Hau Oki is highly misleading. In 1982, there was NO ash layer in the bottom of Pu`u Hau Oki. In fact, the bottom was composed of large cinders and volcanic bombs 1-3 feet in diameter with deep crevices between. (See photo by Juvik submitted with Howarth oral testimony.) Therefore, the proposed "habitat restoration" is artificial habitat, and the University (IfA) has not fulfilled the burden of proof to that their "restored habitat" resembles the original habitat. Howarth OT at 29;1-30;7, Exhibit B-3 at p. 197

Also see comments for FOF 367 below.

63. FOF # 363 at P. 45. See comments for FOF 368 below.

64. FOF # 364 at P. 45. See comments for FOF 367 below.

65. FOF # 365 at P. 46. Dr. Brenner estimated that the probability of success of the habitat restoration is between 80 and 100 percent. Brenner Tr, 2/12/03, p. 175:4-19.

This should be excluded because it is a statement based on speculation, NOT on a statistical probability study based on scientific evidence. The statement assumes facts not in evidence.

66. FOF # 367 at P. 46. Dr. Stone's testimony that further study is needed before habitat can be restored is contradicted both by the testimony of Dr. Howarth and Dr. Brenner, by the DLNR's Site Plan Approval for a Wekiu Bug Habitat Restoration Project on the floor of the Pu`u Hau Oki crater, . . . and by the USFWS support of habitat restoration. (A25 at Bates Stamp 4222-4224)

This should be excluded because it is contradicted by a previous FOF 322, and because it misstates testimony by Howarth and USFWS.

1. This is contradicted by FoF 322: "Despite their rarity, critical habitat for these species is unknown or poorly defined because very little is known about their life cycle, population size, fecundity, and area distribution." Exhibit F30 MKSRCDP p. 35, 54; Exhibit A-7 XI-22

2. Howarth in his Rebuttal Testimony to Brenner's WDT states: "Although there is some correlation between the true population and the number of animals active at any given time, one needs to know the behavior of the species of interest to make any assertions on population size from activity data. We do not have these data for the wekiu bug . . . Dr. Brenner's own monitoring data show the weakness of his assumption, in that some trapping periods caught many bugs while trapping periods in between the high captures caught none. . . Also, Dr. Brenner provides no data for the locations or substrate characteristics for his monitoring traps and therefore, his data cannot be fully evaluated." (Howarth RT at 2) "The assertion that there has been recovery of the wekiu bug population is questionable." (Howarth RT at 8)

3. Howarth testified that the crater floor "restored habitat" of 12 to 18 inches of 1 inch and larger washed cinder on the compacted crater floor could become a "**death trap**" for the Wekiu bug, because it would trap cold air. He recommended larger cinders and boulders on the crater slopes that would permit drainage of cold air and water and result in a deeper vertical layer for Wekiu migration. (Howarth OT at 22-24)

4. The USFWS qualifies their statement in support of the WMKO Outrigger project Wekiu bug monitoring by stating "However, we request that the Final EA for the project specifically describe the protocols of a long-term biological monitoring program that will be implemented for the entire Mauna Kea Science Reserve. The monitoring program should be designed to provide project sponsors with inferences about ecological changes and the impacts of their projects and their management strategies on natural resources within the reserve. **Because the proposed Wekiu bug mitigation would serve little scientific value without a detailed long-term monitoring program, we believe the absence of specific monitoring details . . . to be a serious omission."** (emphasis added) Exhibit A-25 at Bates Stamped 4223-4334

67. FOF # 368 at P. 46. "For the habitat restoration proposed near OT2, Dr. Howarth agreed that the restoration would have a good probability of success if large cinders are placed on the slope and monitoring is conducted and adjustments are made as necessary."

Howarth states: "Larger cinders weather to smaller sizes over time, not the other way around. Therefore, the mitigation plan should screen and use larger sizes perhaps 4 to 6 inches minimum and preferably use mostly vesicular cinders. The 0.5-inch size given in the plan would provide less than 3 mm (~0.1 inches)

usable space to pass between the cinders, which means that **only the smaller nymphs could negotiate such spaces and use the habitat.** Furthermore, any weathering would rapidly degrade the habitat further. Even if larger blocks were mixed with the 0.5-inch cinders, the smaller cinders would fill the spaces and limit the habitat mostly to the smaller size." (emphasis added) Howarth RT at p. 3, to Appendix E

68. FOF # 369 at P. 46. "The habitat restoration proposed near OT2 will be on a slope, includes the use of cinder larger than ½ inch . . .

This contradicts the previous FoF 368, where Howarth clearly called for **large cinders, 4-6 inches minimum,** not ½ inch and larger, but much larger than that.

69. FOF # 371 at P. 46. " The area of habitat restoration near OT1 will be on a slope and will use cinder larger than ½ inch."

The same argument applies here as with FoF 369.

70. FOF # 376 at P. 47. "DLNR's Site Plan Approval . . . requires that the depth of the screened cinder be spread 12 to 18 inches deep. Exhibit A19 at Bates Stamp 02972

This Site Plan Approval should be updated to conform to the evidence presented at the current hearings and with any changes to the Wekiu bug habitat restoration plan recommended by the BLNR. The depth of cinder and other components of the previously approved habitat restoration plan should not take precedence over any more recent recommended changes. Howarth and Stone both testified that there is no evidence to support the 12 to 18 inch cinder depth. See comments under FoF 367 and 368 above.

71. FOF # 377 at P. 47. "The USFWS also supported the recommendation for habitat restoration with the depth of cinder of 12 to 18 inches. . ." (Exhibit A25 at Bates Stamped 4222-4224)

This misstates the USFWS letter to give the appearance that they commented specifically on depth of cinders, whereas they gave only a broad, general approval of all recommendations, and qualified their comments to include additional measures which were NOT carried out:

1. In their letter, USFWS supported all of the recommendations in the 2000 Wekiu Bug Monitoring Report and the commitments in the Draft Wekiu Bug MP. They do not comment specifically about cinder depth, nor do they single out recommendations for detailed analysis. It is clear in this letter that USFWS is supportive of the efforts to reduce negative impacts on the Wekiu bug, without going into any of the specific details. Therefore, it is misleading to imply that USFWS supports any specific cinder depth over any alternative depths.

2. The USFWS letter in Exhibit A25 at Bates Stamped 4223 also states:

"The Final EA should also include a discussion of the cumulative impacts to "Wekiu bug habitat within Pu`u Hau Oki crater from the Subaru and Keck observatory sites." These cumulative impacts were NOT included in the final EA (see comments under 332 above).

3. The USFWS letter on the same page (4223) states:

"However, we request that the Final EA for the (WMKO outrigger telescope) project specifically describe the protocols for a long-term biological program that will be implemented for the entire Mauna Kea Science Reserve." This was NOT included in the Final NASA or UH IfA EA.

4. The USFWS also states on Bates Stamped 4224:

"The Service further recommends that a comprehensive natural resource monitoring program be developed for the entire MKSR." This has not been done.

72. FOF # 387 at P. 49. "The U.S. Fish and Wildlife Service supports the recommendations . . .

1. USFWS qualified their support with additional recommendations, which were NOT included in the Final EA or the FoF. The letter from the USFWS recommends including a discussion of the cumulative impacts to Wekiu Bug habitat within Pu`u Hau Oki of the Subaru and Keck observatory in the Outrigger project EA (see above under FoF 377). Exhibit A25 in Bates Stamp 4111-4112. This recommendation was NOT included in the NASA or UH IfA DEA or FEA.

73. FOF # 388 at P. 49. "the U.S. Fish and Wildlife Service believes each of the recommendations made in the Wekiu Bug Mitigation Plan "will greatly minimize the possibility of negative impact to Wekiu bug habitat.

See FOF 377, 387. USFWS qualified their statement with recommendations for a cumulative impact study and for comprehensive long-term monitoring and natural resource monitoring of the entire MKSR. Exhibit A25 in Bates Stamped 4111-4112 and 4223-4224.

74. FOF # 405 at P. 51. "If the Outrigger Telescopes Project is constructed, the Wekiu bug will continue to survive on other summit cones. Globally, the Outrigger Telescopes Project will not pose a substantial risk to the existence of the existence of the Wekiu bug." Howarth Tr., 2/24/03, p 33:13-34:3.

1. This statement should be excluded because it is taken out of context, and is speculative and assumes facts not in evidence. Not enough is known about the biology and population dynamics of the Wekiu bug to make a determination that it will continue to survive on other cinder cones. Other statements by

Howarth contradict this statement. For example in Englund, Polhemus, Howarth & Montgomery (Exhibit F-44 at 27): "However, Pu`u Hau Kea should be treated with great care because it is currently the last major unimpacted summit cone, and disturbance on this cone should be kept to a minimum."

2. Only in the uppermost summit cones of Mauna Kea have Wekiu bugs been shown to have large numbers of reproducing individuals. These include Pu`u Wekiu, Pu`u Hau Oki and Pu`u Hau Kea. The Wekiu bug numbers in both Pu`u Wekiu and Pu`u Hau Oki have severely declined since the 1982 survey, leaving ONLY Pu`u Hau Kea with a relatively undisturbed habitat and high Wekiu bug numbers. NONE of the other cones surveyed in the Englund 2002 survey had high Wekiu bug numbers. (See comments for FoF 334 above)

75. FOF 410 at P. 51. ". . Effectiveness monitoring will continue quarterly during the entire construction process and for 18 months after the restoration." Brenner WDT at 23

18 months is far too short for effectiveness monitoring (see above at FOF 388). Monitoring of the Wekiu Bug and other species should be conducted throughout the lifetime of the proposed Keck Outrigger telescopes.

76. FOF # 416 at P. 52. "The Wekiu bug population of Pu'u Hau Oki has apparently increased since 1998. This inference is based on trap capture rates." . . . Brenner WDT at 29

This should be excluded because population estimates cannot be supported by use of trap capture rates, which show only presence or absence of Wekiu bugs, and are NOT a population estimate. It assumes facts not in evidence. For example, Englund et al (2002, F-44 at 27) states: "However, these errors are inconsequential when compared to the misleading statement by Pacific Analytics . . . 'The wekiu bug population has apparently increased since 1998'. . . pitfall trapping methods similar to those currently employed by Pacific Analytics measure arthropod activity and '. . . cannot be used as a measure of the population size' ".

77. FOF # 417 at P. 52. "The project as currently designed will benefit the Wekiu bug . . ."

This is speculation and should be excluded. It assumes facts not in evidence.

78. FOF # 418 at P. 52. "There is sufficient information that the Wekiu bug will utilize restored habitat. Research by entomologists has characterized the preferred habitat of Wekiu bugs. Over the last 20 years, during 5 different studies more than 110 field days . . . have been utilized to describe and map Wekiu bug habitat." Brenner WRT at 1.

This is incorrect, assumes facts not in evidence, and should be excluded. (See comments for FoF 358 above). None of the studies have sufficient information about Wekiu bug behavior, migration, or specific habitat requirements to permit this conclusion. For example, in a contradictory statement, FoF 373 states: "Dr. Howarth conceded **that he knew of no study** that determined the depth of cinders in preferred Wekiu bug Habitat" Howarth Tr., 2/24/03, p 22:16-17 (emphasis added).

79. Exception is taken with the H.O.'s omission and or failure to consider the following facts contained in the Petitioner's FOF/COL at P. 10-15. Specific Exceptions are outlined below.

Geology

1. The Keck telescopes are sited in one the edge of a topographic saddle forming the Pu`u Hau Oki cinder cone. The saddle is composed of scoria, or volcanic cinder consisting of gravel- to sand-sized fragments of basalt, washed and stratified by freezing and thawing of snow and frost. The sorting and washing leads to the development of interstitial spaces and voids between the rocks. (F-30 MKSRCDP p 30, 70; A-25 BS 4032, FEA p 70)

2. Construction in areas of volcanic ash can concentrate both runoff and dust. Volcanic dust can permanently change the habitat of ground-dwelling fauna. Dust affects the clarity of the air for telescopes, as well. (F-30 MKSRCDP p 34, 52, 54,70)

3. The density of volcanic ash material present on the cinder cones (such as the site of the Keck telescopes) is rather low. This cinder cone material is loosely packed, with low density, and thus it is subject to dust generation and erosion. (F-30 MKSRCDP p 34, 52, 54,70)

Climate

4. Precipitation at the summit averages approximately 15 inches annually, most of which is rain, freezing fog or snow. Snowfalls are more common during the cooler months, and vary widely from year to year. Localized areas are subject to a rainshadow effect. (F-30 MKSRCDP p 32)

5. The temperatures at the summit range from 11.0 to –4.0 C mean monthly average. (F-30 MKSRCDP p 32)

6. Winds follow a diurnal pattern of prevailing west/northwest daytime and east/southeast nighttime wind direction. Wind velocity usually ranges from 10-

30 miles per hour, but during extreme winter storms, winds occasionally exceed 100 miles per hour on exposed summit areas. (F-30 MKSRCDP p 32)

7. The summit has an active hydrologic system, dominated by ephemeral stream flow in response to storm induced precipitation and rapid snow melt, shallow ground water flow and surface emanations as seeps and springs, and the perched water bodies. The subsurface flow from rainfall and snow-melt on the summit is guided downhill by the presence of impermeable substrates, including lava flows, clay layers, and possibly permafrost zones. Except during storms and periods of rapid snowmelt, the pores and cracks within the shallow subsurfaces are not saturated with water except at Lake Waiau. (A-25 BS 4033-4 FEA p 71-2)

Aeolian Ecosytems

8. The highest tropical island volcano in the world, Mauna Kea hosts endemic neo-geo-aeolian ecosystems and unique organisms adapted to high altitude, regular freezing and thawing, limited precipitation, rapid infiltration of moisture into porous cinder substrates, and high rates of evaporation due to wind and temperature extremes. (FEA 3.6.1)

80. Exception is taken with the H.O.'s omission and or failure to consider the Petitioners' FOF/COL's, regarding CUMULATIVE IMPACTS and PUBLIC TRUST DOCTRINE at P. 62-64. Exceptions outlined below.

Cumulative Impacts

General

65. There is no evidence in the record to demonstrate that the UHIFA has assessed cumulative impacts that the combined Observatories has had for the last 30 years.

66. The State Auditor found " … **the cumulative impact of developing the entire complex was undetermined**. (Exhibit F-23 Audit of Management, P.19)

67. There was not evidence provided to demonstrate that the UHIFA had assessed the cumulative impacts of the sewage treatment, hazardous materials, impacts on the landscape, view planes, Wekiu Bug, Wekiu Bug Habitat, summit Flora and Fauna or the impacts on the Lake Waiau and the Traditional Cultural Properties and associated Traditional and Customary Native Hawaiian Practices.

68. **HAR § 11-200-12(a)** requires that, in considering the significance of potential environmental effects, "agencies shall consider the **sum of effects** on the quality of the environment, and evaluate **the overall and cumulative effects** of an action." (Emphasis added). Further, in determining whether an action may have a significant effect, an agency must consider "every phase of a proposed action, the expected consequences, both primary and secondary, and the **cumulative** as well as the short and long-term effects of the action." HAR § 11-200-12 (emphasis added). HAR § 11-200-2 defines a "cumulative impact" as "the impact on the environment which results from the **incremental impact** of the action when added to other **past, present, and reasonably foreseeable actions regardless of what agency or person undertakes such other action**." (Emphases added).

> An action has a significant effect on the environment if it:
> (1) Involves an irrevocable commitment to loss or destruction of any natural or cultural resource;
> (2) Curtails the range of beneficial uses of the environment;
> (3) Conflicts with the state's long-term environmental policies or goals and guidelines as expressed in chapter 344, HRS, and any revisions thereof and amendments thereto, court decisions, or executive orders;
> (4) Substantially affects the economic welfare, social welfare, and cultural practices of the community or State;
> (5) Substantially affects public health;
> (6) Involves substantial secondary impacts, such as population changes or effects on public facilities;
> (7) Involves a substantial degradation of environmental quality;
> (8) Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions;
> (9) Substantially affects a rare, threatened, or endangered species, or its habitat;
> (10) Detrimentally affects air or water quality or ambient noise levels;
> (11) Affects or is likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters;
> (12) Substantially affects scenic vistas and view planes identified in county or state plans or studies . . ..

69. HAR § 11-200-12(b).

A more thorough environmental impact statement evaluating impacts is generally appropriate when there are "'substantial questions are raised as to whether a project may cause significant [environmental] degradation.'" Blue Mountains Biodiversity Project v. Blackwood, 161 F.3d 1208, 1216 (9th Cir.

1998). (quoting Idaho Sporting Congress v. Thomas, 137 F.3d 1146, 1149 (9th Cir. 1998), cert. denied, Malheur Lumber Corp. v. Blue Mountains Diversity Project, 527 U.S. 1003 (1999)). See also La Flamme v. F.E.R.C., 852 F.2d 389, 397 (9th Cir. 1988) ("plaintiff need not show that significant effects will in fact occur"; an EIS is required "if substantial questions are raised as to whether a project ... may cause significant degradation of some human environmental factor"); Blue Ocean Preservation Society v. Watkins, 767 F. Supp. 1518 (D. Haw. 1991) (same).

70. UHIFA should have provided BLNR with information addressing the cumulative impacts of the Project. Under HRS Chapter 343-2,"significant effect" is defined as "the **sum of effects** on the quality of the human environment**, including actions that irrevocably commit a natural resource, curtail the range of beneficial uses of the environment, are contrary to the State's environmental policies or long-term environmental goals as established by law, or adversely affect the economic welfare, social welfare, or <u>cultural practices</u>** of the community and State." **HRS § 343-2.**

71. HRS Chapter 343 imposes special obligations to evaluate cultural impacts. HRS Chapter 343 was amended in 2000 to add the term "cultural practices" to the definition of "significant effect." See Act 50 (2000). The Legislature found that "there is a need to clarify that the preparation of environmental assessments or environmental impact statements should identify and address effects on Hawai`i's culture, and traditional customary rights." Id. It recognized that "the native Hawaiian culture plays a vital role" in the preservation of Hawai`i's "aloha spirit" and that "Articles XI and XII of the state constitution, other state statutes, and the courts of the State impose on government agencies a duty to promote and protect cultural beliefs, practices, and resources of native Hawaiians. . . ." Id. It observed that the past failure to require native Hawaiian cultural impact assessments had resulted in the loss and destruction of many important cultural resources and interfered with the exercise of the native Hawaiian culture. Id. It found that due consideration of the effects of human activities on native Hawaiian culture was necessary to ensure the culture's continued existence, development and exercise. Id. See also Stand. Comm. Rep. No. 3298 (expressing the Committee's belief that the amendment would result in "a more thorough consideration of an action's potential adverse impact on Hawaiian culture and tradition, ensuring the culture's protection and preservation"). Thus, there is a specific requirement that agencies evaluate the impact of their actions on the native Hawaiian culture.

72. As discussed above, the testimony will show that the EA does not address or evaluate significant cumulative impacts to cultural resources and native Hawaiian practices, and that there is a potential for substantial adverse impact on irreplaceable natural resources such as the Wekiu Bug and water

quality/hydrology. UHIFA's EA fails to sufficiently analyze those significant impacts, making it impossible for it to meet its burden under the BLNR regulations and for the BLNR to meet its affirmative constitutional public trust responsibilities.

124. In *In Re Water Use Permit Applications*, 94 Hawai`i 97, 9 P.3d 409 (2000) ("the *Waiahole Ditch Case"*), the Hawai`i Supreme Court recognized that public trust doctrine was "a fundamental principle of constitutional law in Hawai`i." Haw. Const., Art. XI, section 1,at 133, 9 P.3d at 444.

125. There, the duties imposed by the public trust doctrine were not supplanted by or made superfluous by the enactment of the Water Code. *Id.* Likewise, the duties imposed by the public trust doctrine in this case are not supplanted or made superfluous by HRS Chapter 183C or the regulations promulgated there under. "Mere compliance by [agencies] with their legislative authority is not sufficient to determine if their actions comport with the requirements of the public trust doctrine. The public trust doctrine at all times forms the outer boundaries of permissible government action with respect to public trust resources." *Id.* at 132, 9 P.3d at 445 (citing to *Kootenai Envtl. Alliance v. Panhandle Yacht Club, Inc.*, 105 Idaho 622, 671 P.2d 1085, 1095 (Idaho 1983)). Thus, BLNR, like the Commission on Water Resource Management in the *Waiahole Ditch Case*, has an "affirmative duty" to take the public trust into account in permitting the use of public lands located in the conservation district and "**to protect the public trust uses whenever feasible**." *Id.* at 141, 9 P. 2d at 459 (emphasis added).

126. Mauna Kea is part of the public trust. Although the Court declined in the *Waiahole Ditch Case* to define the full extent of Article XI, section 1's reference to "all public [natural] resources," *id.* at 133, 9 P.3d at 444, there can be no real dispute that Mauna Kea is a "public natural resource." Mauna Kea is part of the "ceded lands trust," lands ceded by the federal government back to the State of Hawai`i by Section 5(b) of the Admission Act and pursuant to Article XVI, Section 7, of the Hawai`i Constitution. These lands are held by the State as "a public trust for native Hawaiians and the general public." Haw. Const., Art. XII,sec. 4. Mauna Kea has also been designated a National Natural Landmark because of its unique geological and biological features. It is eligible for listing in the National Register of Historic Places as a traditional cultural property. There is no doubt that it is a public natural resource of invaluable worth to the public and Native Hawaiians.

127. Therefore, BLNR must independently uphold the Constitutional mandate that it "shall conserve and protect Hawaii's natural beauty and all natural resources…in a manner consistent with their conservation." Haw. Const., Art. XI, sec. 1. The testimony of Drs. Howarth and Stone demonstrated that the Project will adversely impact the Wekiu Bug, that it is not known how the mitigation plan will affect the Wekiu Bug, and that the mitigation may likely harm or create "death traps" for the Wekiu Bug. In the face of such uncertainty, it is prudent to adopt the "precautionary principle" -- a scientific environmental law principle that requires "where uncertainty exists, a trustee's duty to protect the resource mitigates in favor of choosing presumptions that also protects the resource." *Id.* at 154, 9 P.3d at 154 (quoting COWRM's Conclusions of Law at 33 citing *Lead Indus. Ass'n v. EPA*, 647 F.2d 1130, 1152-56 (D.C. Cir. 1976 [1980]), *cert. denied*, 449 U.S. 1042 (1980). Because it is uncertain what effect the mitigation plan will have on the Bug, this BLNR must assume that the effect of the Project and the mitigation plan will be adverse, contributing to the possible extinction of the species. Granting UH-IFA's CDUP would be contrary to fundamental public trust obligations to protect and conserve public natural resources for future generations.

128. **Granting the UHIFA's CDUP would be contrary to the fundamental public trust obligation to protect and conserve public, natural resources for future generations.**

CONCLUSION

There are major deficiencies in this CDUA process that indicate Applicant's failure to overcome the burden of proof necessary to prove its case.

This CDUA should be denied.

DATED: Kamuela, Hawaii, June 18, 2003.

/s/ Clarence Ching

CLARENCE CHING

Pro Se

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of the foregoing document was duly served on this date on the following parties as indicated below:

.Sorry, I can't get this computer to do list the parties' names and addresses in the correct format. Certificate and Table of Contents will follow.

DATED: Kamuela, HI, June 18, 2003

/s/ Clarence Ching
CLARENCE CHING

Pro Se